

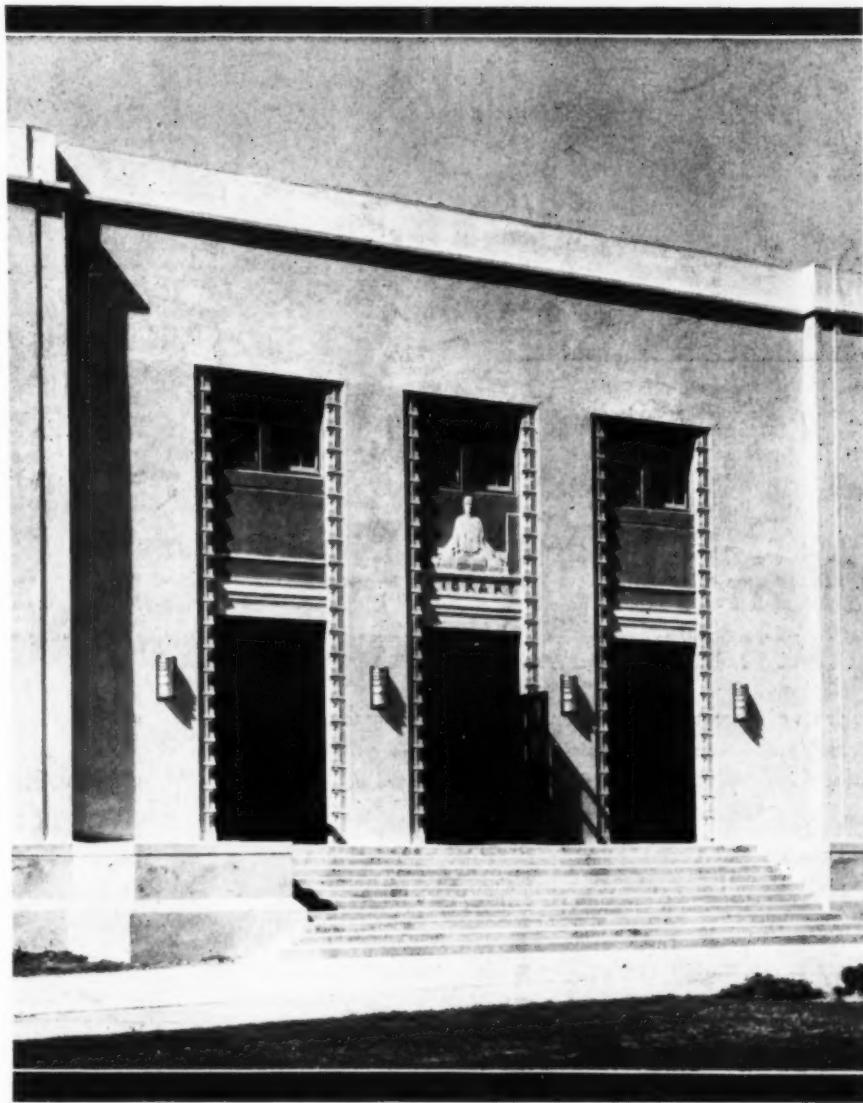
PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

SEP 10 1936

VOLUME 93 NUMBER 3
SEPTEMBER, 1936

THE AMERICAN School Board Journal

A PERIODICAL of SCHOOL ADMINISTRATION



EXECUTIVE RESPONSIBILITY IN SCHOOL
ADMINISTRATION — Theodore Lee Reller

THE BRUCE PUBLISHING CO
MILWAUKEE • • • CHICAGO • • • NEW YORK



SYLPHON CONTROLLED—U.S. DEPARTMENT OF JUSTICE BUILDING
 Zantzinger, Borie and Medary, Philadelphia, Pa. Architects
 Isaac A. Franklin, Philadelphia, Pa. Engineers
 George A. Fuller Co., Washington, D. C. General Contractors
 Riggs, Distler & Co., Inc. Heating, Plumbing and Air Conditioning

**SYLPHON CONTROLLED—
 U. S. INTERSTATE COMMERCE COMMISSION LABOR BUILDING**
 Arthur Brown, Jr., San Francisco, Calif. Architect
 C. H. Snyder, San Francisco, Calif. Engineer
 James Stewart & Co., New York City General Contractors
 Standard Engineering Co., Inc., Wash., D. C. Heating and Plumbing
 Carrier Engineering Corp., Newark, N. J. Air Conditioning

**SYLPHON CONTROLLED—
 U. S. DEPT. OF INTERIOR BUILDING**
 Waddy B. Wood, Washington, D. C. Consulting Engineer
 George A. Fuller Co., Washington, D. C. General Contractors
 Riggs, Distler & Co., Inc. Heating, Plumbing and Air Conditioning



SYLPHON SYSTEMS OF TEMPERATURE CONTROL FOR SPACE HEATING, VENTILATING AND AIR CONDITIONING

After years of research, development, and highly successful application and service experience in buildings of all types—the Fulton Sylphon Company now makes the first public announcement of SYLPHON CONTROL SYSTEMS for heating, ventilating and air conditioning.

Not one—but two distinct complete systems of control are offered:

1. Self-Contained Control System—This system utilizes a complete line of Sylphon self-contained, self-powered instruments requiring no auxiliary power, motors, wiring, thermostats, relays or switches. Co-ordinated to provide completely automatic *modulating, non-cycling* control of any or all functions of heating, ventilating and air conditioning.

2. Semi-Self-Contained Control System—This system combines the desirable features of the Self-Contained Control System with the advantages of electric operation, where electric thermostats, humidi-

stats, time-clocks, manually operated remote station switches, etc. are desired—yet, like the self-contained system, it requires no electric motors or relays for operation.

Now, whatever the control problem, you may turn to one nation-wide organization for unbiased advice on its correct solution. For in one or the other of these control systems, or among the multifarious possible combinations which they offer, will be found the ideal control result you are seeking.

Now you may centralize control responsibility in one organization who will analyze your requirements, assist you in selecting the correct system, install it, service it, and guarantee its satisfactory performance.

Get in touch with the Fulton Sylphon Office nearest you. Get the complete story of Sylphon Control Systems, the product of 35 years of experience in the application of Sylphon Controls in over 200,000 installations.

FULTON SYLPHON CO.
 NEW YORK, N.Y. KNOXVILLE, TENN.

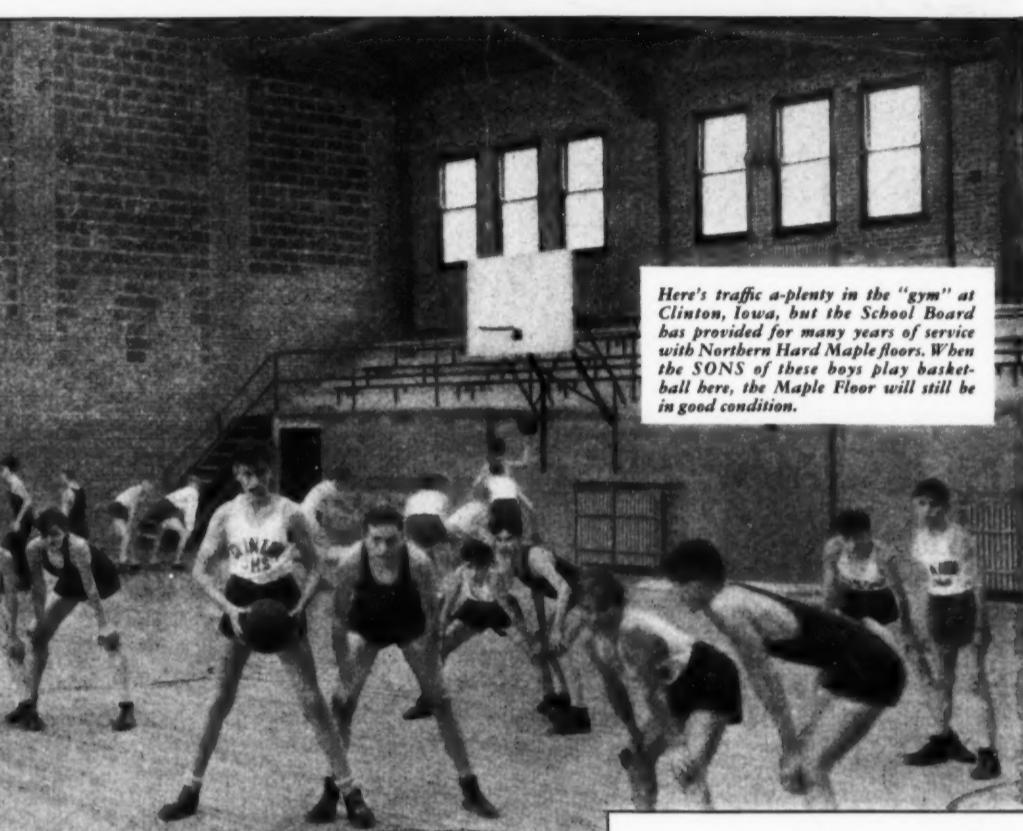
BOSTON . . . PHILADELPHIA . . . BALTIMORE . . . ATLANTA . . . CLEVELAND . . . ST. LOUIS . . . DETROIT
 CHICAGO . . . SEATTLE . . . PORTLAND . . . SAN FRANCISCO . . . LOS ANGELES . . . DALLAS
 and in 35 other principal cities in the U. S. A., Montreal, Canada and London, England.

"EXPERIENCE HAS PROVED HARD MAPLE THE MOST SATISFACTORY FLOORING FOR CLASSROOMS AND GYMNASIUMS . . ."

Says A. H. MORRELL, Architect



In the Washington Junior High and Jefferson Grade School, (Clinton, Iowa), designed by architect Morrell, all classroom floors and the gymnasium are floored with Northern Hard Maple.



Here's traffic a-plenty in the "gym" at Clinton, Iowa, but the School Board has provided for many years of service with Northern Hard Maple floors. When the SONS of these boys play basketball here, the Maple Floor will still be in good condition.



For COMFORT • For APPEARANCE • For SANITATION • For SERVICE • For ECONOMY

NO greater tribute could be paid to Northern Hard Maple than the unanimity of opinion among those responsible for planning America's schools. Architect after architect sums up his reasons for selecting Northern Hard Maple in this simple statement: "Experience proves it to be the most satisfactory flooring for school floors."

Architects know that Northern Hard Maple alone provides the combination of qualities that school floors require. Consider what Hard Maple offers: Its dry warmth and resilience beneath the feet is conducive to student health and comfort. Its lastingly smooth surface is remarkably sanitary, offering no lodging places for dirt and dust. The fibre of Hard Maple is so

tough, the grain so tight, that it does not sliver, splinter or develop ridges—it actually outwears stone! Kept clean by brushing alone, Hard Maple reduces maintenance costs. Hard Maple provides firm anchorage for desks—simplifies alterations and other construction work.

Architects have seen all of these qualities demonstrated in school after school, over a period of many years. When your architect specifies MFMA* Northern Hard Maple (in strips or blocks), it is because he knows that it will give the most satisfactory service and result in the greatest economy.

Floor with Maple

*The letters MFMA on Maple, Beech or Birch Flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**



GOOD SERVICE FINISHES AVAILABLE

Specially adapted to old or new school floors of Maple, these heavy-duty finishes enhance Hard Maple's natural beauty, seal its surface, resist soil stains, and prove non-slippery. They will not mar, scratch or flake off. So easily cleaned, they further reduce Maple's low maintenance cost.

The PLUS VALUE in MFMA Hard Maple

Members of the Maple Flooring Manufacturers Association have contributed many thousands of dollars and years of work to standardize and improve the manufacture and grade uniformity of Northern Maple, Beech, and Birch flooring. The following manufacturers offer the advantages of MFMA trade and grade marking and grade supervision. Specify MFMA on the flooring you use.

Beck, August C. Co. Milwaukee, Wis.
Brown Dimension Co. Manistique, Mich.

Bruce, E. L. Company Memphis, Tenn.
(Mill at Reed City, Mich.)

Connor Lumber & Land Co., Laona, Wis.
(Sales Office, Marshfield, Wis.)

Cummer-Diggins Co. Cadillac, Mich.

Farrin Lumber Co., M. B., Cincinnati, O.

Holt Hardwood Co. Oconto, Wis.

Kerry & Hanson Flooring Co. Grayling, Mich.

Kneeland-Bigelow Co. Bay City, Mich.

North Branch Flooring Co., Chicago, Ill.

Northwestern Cooperage & Lumber Co. Gladstone, Mich.

Oval Wood Dish Corp. Tupper Lake, N. Y.

Robbins Flooring Co. Rhinelander, Wis.

Sawyer Goodman Co. Marinette, Wis.

Stephenson Company, I. Wells, Mich.

Wells, J. W., Lumber Co. Menominee, Mich.

Wisconsin Land & Lbr. Co. Hermansville, Mich.

Yawkey-Bissell Lumber Co. White Lake, Wis.

See our catalog data in Sweet's, Sec. 15/53. Our service and research department will gladly assist you with your flooring problems. Write us.

**MAPLE FLOORING
MANUFACTURERS ASSOCIATION**
1780 McCormick Building
Chicago, Illinois



Taming Old Man Weather

The Von Duprin threshold of extruded bronze does astonishing things for the doorways of buildings. It keeps out drafts, bars the way to the heaviest rain, makes doors fit snugly at the bottom, saves fuel.

WARMER HALLS AND LOWER COSTS WITH

Von Duprin

Self-Releasing Fire and Panic Exit Latches

Old winter holds no terrors for this little girl's parents, or for the superintendent of buildings, or for the custodian.

She is safe against the possibility of being unable to get out in case of fire or panic, for the big doors are equipped with Von Duprin *drop-forged* exit devices. *Safe exit is sure.*

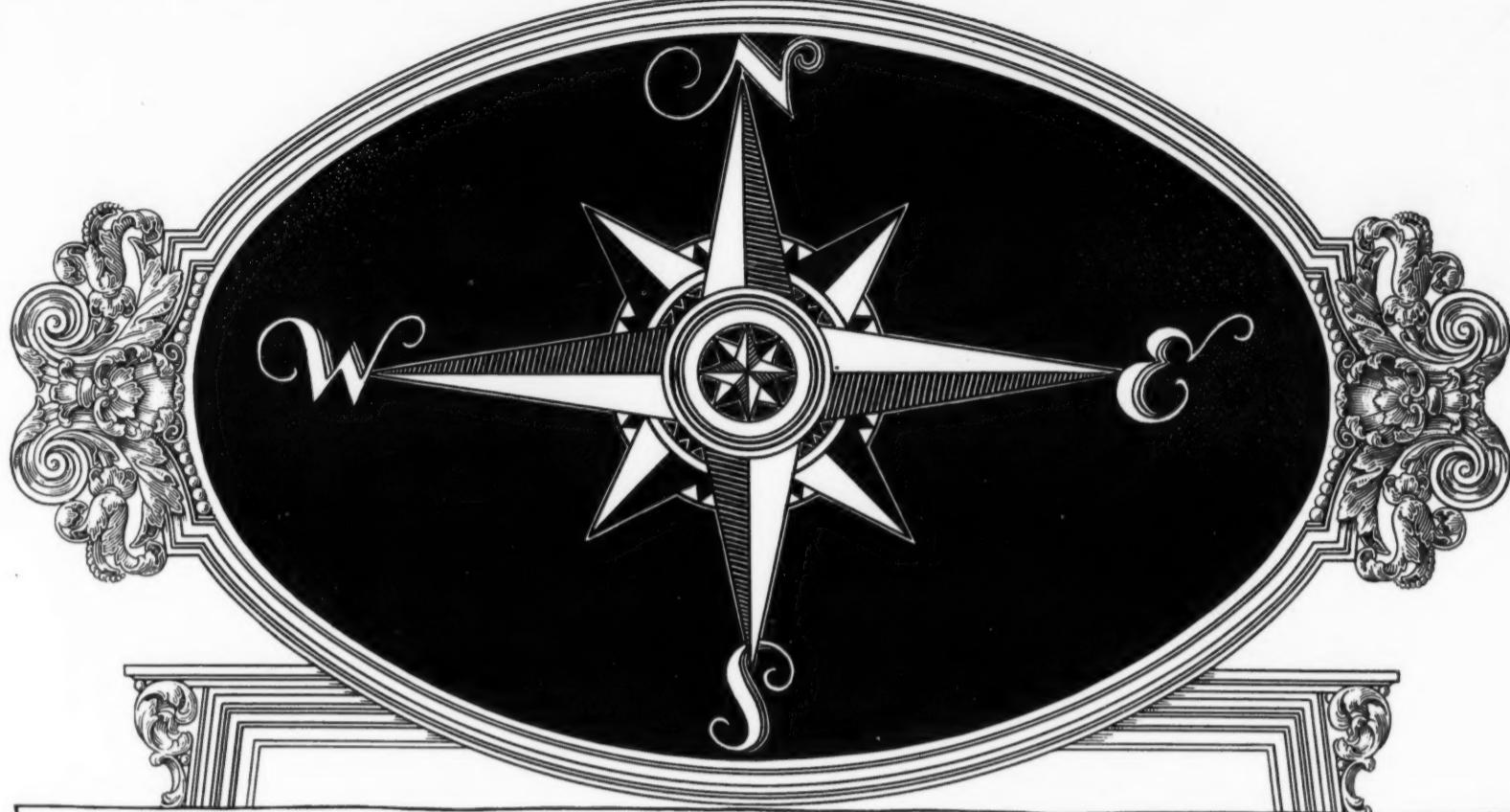
And with the heavy duty J-M hinges, the Von Duprin Threshold, the Compensating Astragal, those doors are going through the winter—and scores of winters to come—with little or no maintenance cost. Not only that, but they are weatherproof doors—and they will soon save the cost of the devices in fuel alone.

Sweet's Index 18

Complete literature and specification data is yours on request.

VONNEGUT HARDWARE CO.

INDIANAPOLIS, IND. • Von Duprin Latches are listed as standard by Underwriters Laboratories, Inc.



EDUCATION IS MARCHING FORWARD! ARE YOU SURE OF YOUR DIRECTION?

Please do not think of the Mimeograph as mere mechanical equipment. To countless executives this Process means a live and progressive service which is helping sturdily to set the guide-posts for important betterments in school administration. To assure the best cooperation to schools, we have a staff of experienced educators constantly at work devising methods of making the Mimeograph a more effective tool of education. For example, the new ready-prepared stencil service is a most convenient means of quickly producing lesson sheets, administrative forms, outline maps, and reading booklets—material of fine quality at lowest possible cost. The Mimeograph Process is admittedly unique on this vital point: *it meets every duplicating need of the modern school system.* In your community there is a Mimeograph representative ready to demonstrate what this means to you. See classified telephone directory or write A. B. Dick Company, Chicago.

Free to school executives. Send for your complimentary copy of new and illuminating folder entitled, "The All Purpose School Duplicating Process." Address Educational Department, A. B. Dick Company, Chicago.

M I M E O G R A P H

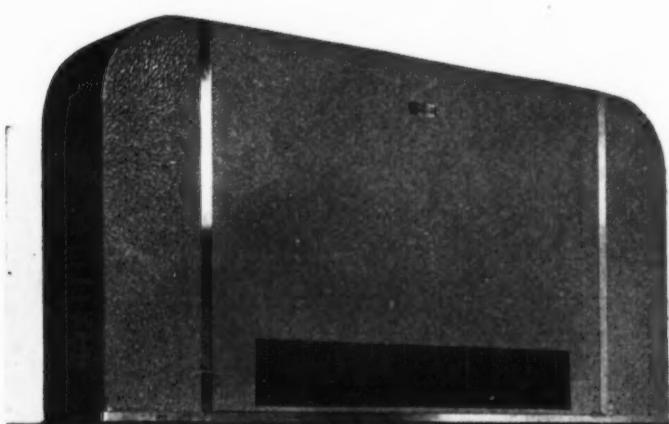




JOHN NOBLE PIERSON & SON of Perth Amboy, N. J.,
have installed 641 NESBITT UNITS
in 78 of the SCHOOLS designed by them since 1922

Send for "The Story of Syncretized Air"
 John J. Nesbitt, Inc., Holmesburg, Philadelphia, Pa.
 or 11 Park Place, New York City

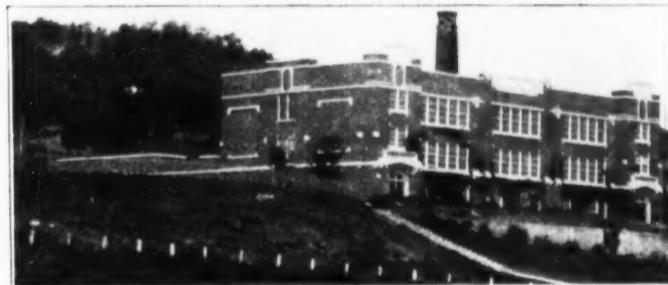
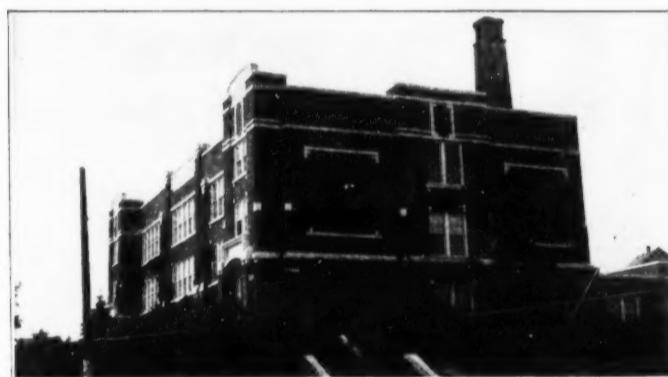
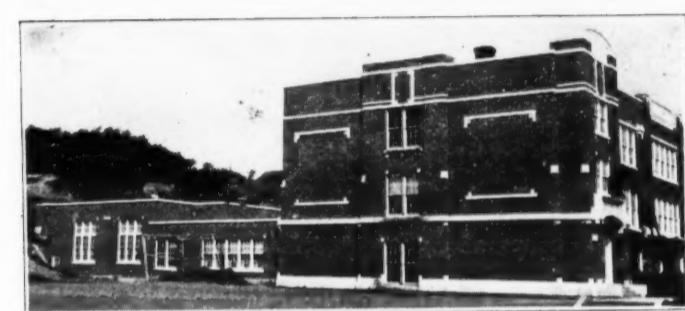
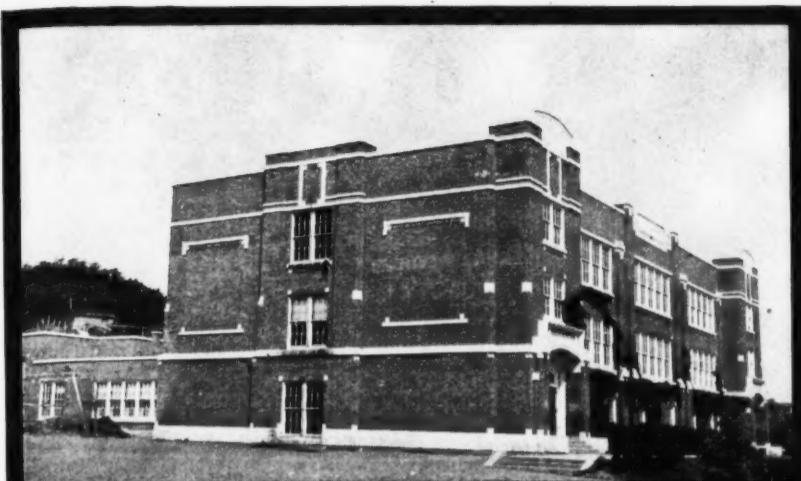
WHEN leading school architects like John Noble Pierson & Son repeatedly specify Nesbitt heating and ventilating units over a long period, their actions speak louder than words for the efficiency and dependability of these well-built units. In considering the matter of classroom air for your new or old school, look back over Nesbitt's long record of faithful service, then look ahead—and choose Nesbitt Syncretizers, the last word in producing comfortable, healthful indoor air with maximum economy.



—NESBITT
Syncretized Air

PERPETUAL JUNE IN THE CLASSROOM

NESBITT SYNCRETIZERS ARE SOLD BY AMERICAN BLOWER CORPORATION, BUCKEYE BLOWER COMPANY, AND JOHN J. NESBITT, INC.



MICHIGAN SCHOOLS SAVE 40% OF FUEL BILL

"Last January," writes Mr. Irl. N. Dulebohn, Supt. of Bessemer Township Schools, Ramsay, Mich., "the board of education purchased seven Whiting Stokers. They are easy to operate and our buildings were heated more uniformly than ever before under hand firing. We ran a test to determine relative amounts of fuel used under hand and stoker firing. Weighing the coal consumed as carefully as we could, the result favored stoker firing by 33% in amount of fuel and about 40% in fuel cost. We are satisfied that the stokers were a very good investment."



STANDARD SCHOOL MODEL
Refractory or dead-plate setting. Capacities: 60 to 1250 lbs. of bituminous coal per hour.

WHITING STOKER

ALSO
A COMPLETE
RESIDENTIAL LINE

WHITING CORP., 15626 So. Halsted St., Harvey, Ill.

Gentlemen: Please mail data describing WHITING STOKERS
 for school use for home use.

NAME _____

BY _____ TITLE _____

ADDRESS _____

CITY _____ STATE _____

LAST CHANCE

TO CHECK AGAINST
NEEDLESS FUEL WASTE
THIS WINTER

ITEM	OK	REPLACE
TRAPS		✓
AIR and VACUUM VALVES		
SUPPLY VALVES		
PUMPS		



A critical survey of your heating plant today may reveal many unsuspected causes for excessive heating costs.

The mere fact that a heating plant is still able to raise steam is no indication that it is operating in accordance with modern standards of economy. Like everything else, heating equipment wears out, becomes out-moded, inefficient. Hidden weaknesses creep in—and up goes steam cost!

There's still time to make a thorough check-up of your heating plant—and it's a quick and easy way to head off future fuel extravagance. See the chart above. Here is listed the key equipment which in a steam heating system needs periodic inspection and replacement.

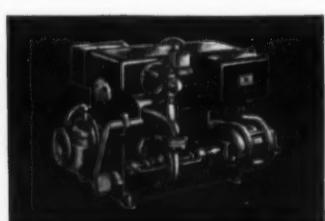
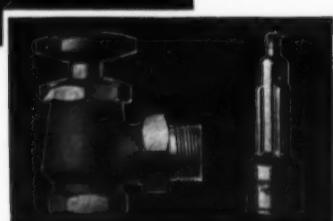
When you select replacement units, give careful consideration to Hoffman Specialties. Because you'll find them the choice wherever heating demands are most exacting—giving the efficient performance that has made them vitally important to modern heating methods.

Length of service is guaranteed by the excellence of material and workmanship that goes into every Hoffman Product. Last, but not least, is the fact that Hoffman makes a complete line of steam heating specialties. Your plant can be equipped with Hoffman quality products throughout, with no divided responsibility for satisfactory operation.

Hoffman offers a complete line of specialties for modernization of steam heating plants.



Send today for bulletins on Hoffman Venting Valves, Traps, Supply Valves and Hoffman-Economy Pumps.



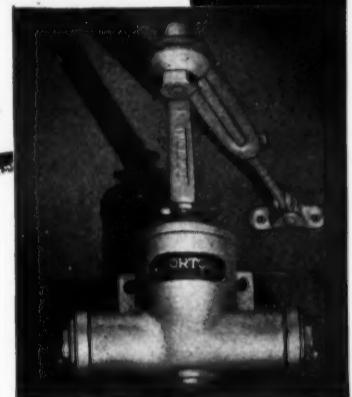
HOFFMAN SPECIALTY CO., Inc.

Dept. AS-9, Waterbury, Conn.

Traps . . . Venting Valves . . . Supply Valves . . . Pumps

NORTON DOOR CLOSER

Correctly Lubricated
With
Mineral Oil



POSITIVE CONTROL

Highest quality materials and workmanship are employed to build Norton Door Closers. Leakproof construction permits the use of mineral oil which correctly lubricates all working parts and insures efficient operation over a long period.

Write for the Norton Catalog.

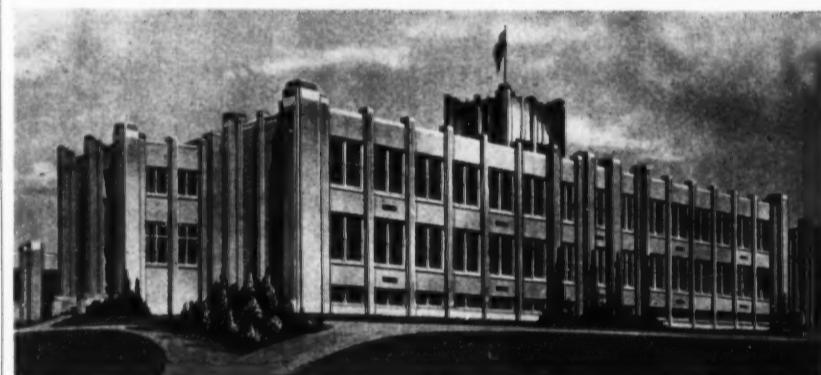
NORTON DOOR CLOSER COMPANY

Division of the Yale & Towne Mfg. Company

2906 N. WESTERN AVE.

CHICAGO, ILL.

DOOR CLOSERS FOR ALL SCHOOL DOORS



Hershey Industrial Junior and Senior High School, Hershey, Pa.
15 Hp. Spencer Central Cleaning System.

PROTECT AND SAVE with Spencer Vacuum Cleaning

Vacuum cleaning is used in schools primarily because it is the one sure method of removing all the dirt and dust in the shortest time and at the lowest cost.

Another large item of saving is the protection and preservation of floor surfaces, walls, decorations, furniture and equipment. Fine dust constantly stirred up by traffic between class rooms is the worst enemy of health as well as property.

Spencer Vacuum Cleaning Systems remove not only the accumulations of dirt that are the source of dust, but even the finest dust itself is drawn into the System.

Another item of saving is in the operating cost. Spencer Systems are built to last over a long term of years, and to continue to provide the same high degree of efficiency that is evident the day they are first installed.

SEE THE SPENCER EXHIBIT, BOOTH 54 AND 55, ST. LOUIS, OCT. 12-16.

SPENCER Central AND PORTABLE
HARTFORD Vacuum Cleaning Systems

THE SPENCER TURBINE CO., HARTFORD, CONN.

ISN'T IT SIGNIFICANT



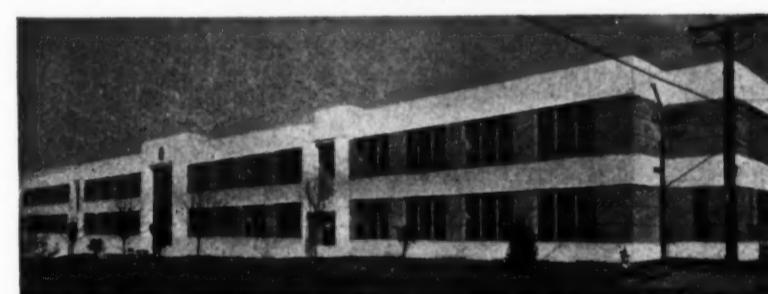
Elementary School, Georgetown, Del.
Brown & Whiteside, architects. R. P. Schoenjahn, engineer.



Junior High School, Champaign, Ill.
George E. Ramey & Company, Berger & Kelley, architects.



Washington Grade School, Manistee, Mich.
Robinson & Campau, architects.



Washington Jr. High School, Long Beach, Cal.
W. Horace Austin, architect.

that



is installed in

BUILDING AFTER BUILDING?

It is more than mere accident that **Johnson** apparatus controls the temperatures in these interesting school buildings, featured in the August and September issues of THE AMERICAN SCHOOL BOARD JOURNAL. It is just one more convincing proof of the fact that school people, everywhere, are aware of the superiority of **Johnson** systems. . . . For fifty years, this organization has been devoted to just one line of business—the design, manufacture, and installation of automatic temperature and humidity control equipment. No matter what type of heating and ventilating plant is encountered—"split" systems, blast heating, unit ventilators—there is **Johnson** apparatus, tried and tested, to secure the desired results, economically and effectively.

SEPTEMBER IS HERE AGAIN!

When cold weather comes, heating and ventilating systems must be ready to function, at a few hours notice. That is the time when the benefits of "September forethought" are realized. Of primary importance is the **automatic temperature regulation system**. Is it in perfect condition? Are there additions and improvements that should be made? Often, permanent renewal of certain parts or entire devices puts an end to annoying and frequent repairs.

Johnson DUAL THERMOSTATS are highly desirable in rehabilitating existing temperature regulation systems. DUAL THERMOSTATS may be applied to existing "single temperature" installations. Occupied rooms

are heated to a "normal," 70-degree, temperature while unused sections of the building are maintained at, say, 50 degrees. Thus, certain rooms may be heated at odd hours without separate steam mains. . . . **Johnson** radiator valves with seamless metal diaphragms are available as replacements for obsolete valves. . . . The cost of modern equipment is recovered through noticeable reduction in maintenance expense.

Why not ask a **Johnson** sales engineer, from our nearest office, to inspect your automatic temperature control systems and prepare a report on necessary and desirable betterments? There is no obligation. **JOHNSON SERVICE COMPANY**, Milwaukee, Wis., and all principal cities.

JOHNSON AUTOMATIC HEAT & HUMIDITY CONTROL
for Individual Rooms . . . for Air Conditioning . . . for Heating Zones

66 Units FOR INDIANA STATE TEACHERS COLLEGE



State Teachers College, Terre Haute, Ind. Architect—Miller & Yeager, Terre Haute, Ind. Contractor—Freyn Bros. Inc., Indianapolis, Ind. Engineer—Ralph A. Stuart, Terre Haute, Ind.

FOR the new Training School, State Teachers College, Terre Haute, Ind., Sturtevant DeLuxe Unit Ventilators were the choice.

And 66 of these handsome units have been installed...Finished in an attractive brown and trimmed with lustrous stainless steel.

Striking modern design plus sound engineering is the combination in this unit ventilator, which has won the preference of architects, engineers and school board officials.

Ask your architect about them. He has complete information in his 1936 Sweet's Catalog File, Section 26, Catalog 16.



B. F. Sturtevant Co., Hyde Park, Boston, Mass.
Branches in 40 principal cities

B. F. STURTEVANT COMPANY OF CANADA, LTD., GALT.
Sales Offices in Toronto and Montreal Repres. in Principal Canadian Cities

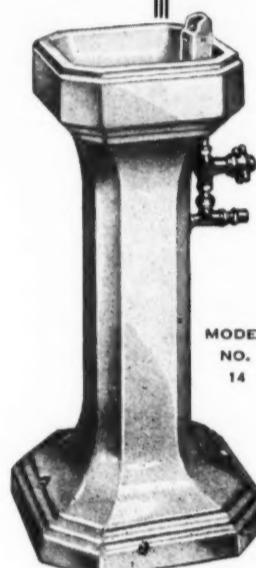
THE NEW UNIT VENTILATOR

by **Sturtevant**

REG. U. S. PAT. OFF.

Specify RUNDLE-SPENCE Drinking Fountains

"Lips can't touch
the R-S nozzle"

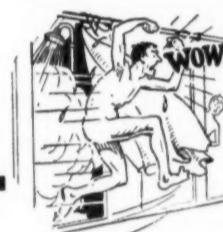


Safeguards Of Health

There are many other
wall and pedestal mod-
els in our complete line.
Write for illustrated cat-
alog.

RUNDLE-SPENCE
MFG. CO.

445 NO. FOURTH ST., MILWAUKEE, WISCONSIN



Want to eliminate the
danger of scalding in
your showers?

No More Unexpected "Shots" of Icy Cold or Scalding Hot Water!

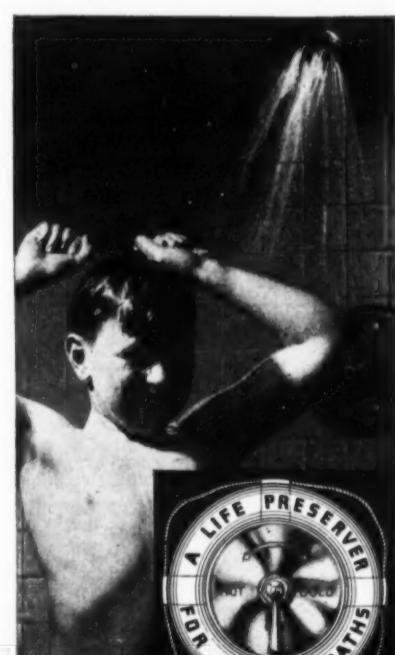
No more slipping on a wet tile floor
while trying to dodge a stream of hot
or cold water.

When you use a shower regulated
by a Powers automatic safety shower
mixer the temperature remains right
where you want it. You can really
enjoy the thrill of a comfortable
shower in absolute safety.

Why they're more Economical—no
waste of hot or cold water while waiting
for a shower at the right tempera-
ture. Powers mixers speed up bathing
by eliminating these unnecessary de-
lays.

Write for bulletin No. 258 describ-
ing our safety water mixing valves
for all types of showers. The Powers
Regulator Co., 2721 Greenview Ave.,
Chicago—Offices in 45 Cities; see your
phone directory.

Forty-Five Years of Temperature
Control.



POWERS SAFETY SHOWER MIXERS

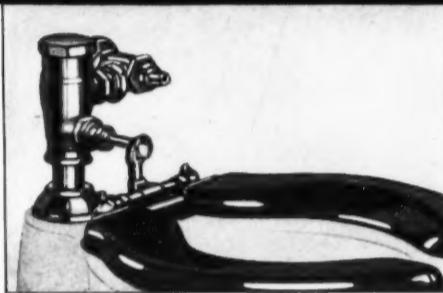
Crane Equipped SCHOOLS ARE BETTER SCHOOLS

EARLY obsolescence and deterioration in school plumbing equipment is not only expensive but may actually be hazardous to the health of pupils. Crane Co. has taken pains to investigate every condition under which school plumbing equipment has to operate. The result is a line of equipment not only adequate as to design and function, but of a quality which makes it the most economical and the safest equipment to buy.

Take flushing valves as an example. They receive as much punishment as any other piece of school equipment. The Crane flushing valve anticipates rough handling, does its job with dependable thoroughness year after year and protects and safeguards the health of the whole school community with a vacuum breaker which is proof against back-siphonage and pollution of fresh-water supply.

Every other Crane product for the school has been engineered with similar thoroughness. A few of them are shown here. Consult your architect or engineer for the latest and finest school plumbing equipment. He knows and approves Crane quality.

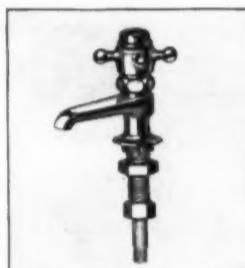
The Crane Finance Plan enables you to modernize with no money down, three years to pay.



C 12929 A DELTA Exposed Seat-Operated Flushing Valve with Vacuum Breaker



C 43788 Shower with concealed mixing valve and Refreshor Easy-Clean Shower Head with adjustable ball joint. Insert shows close-up of REFRESHOR Shower Head



C 31960 R IMPROVED TRIUMPH Ball-Bearing, Self-Closing Faucet with renewable seat, renewable trimming unit and four-ball metal handle.



C 32905 N TELSA Double Wash-Sink Faucet



C 9540 NEWERA Three-Stream Angle Bubbler with integral regulating screw.

CRANE

CRANE CO., GENERAL OFFICES: 836 SO. MICHIGAN AVE., CHICAGO, ILL. • NEW YORK: 23 W. 44TH STREET

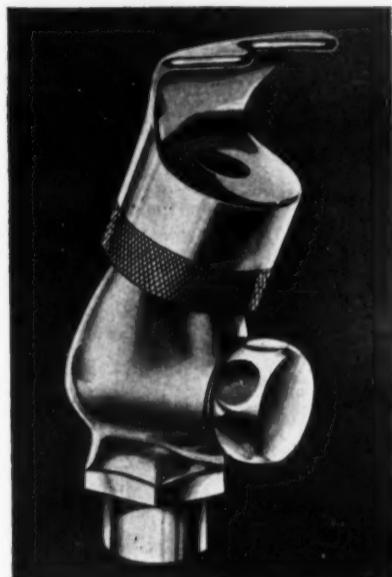
Branches and Sales Offices in One Hundred and Sixty Cities

VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIAL

DRINKING FOUNTAINS FOR SCHOOLS

Should Embody

- Sanitation
- Economy of Water Used
- Automatic Stream Control
- Positive Non-Squirt Feature
- Impossibility of Contamination

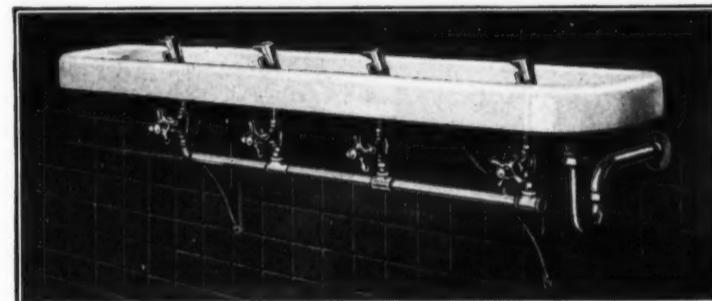


No. 700
Century Automatic Bubbler Head

These features are incorporated in Century Fountains equipped with Century No. 700 Automatic Bubbler Head

Write for complete Catalog

CENTURY BRASS WORKS, Inc.
BELLEVILLE, ILLINOIS

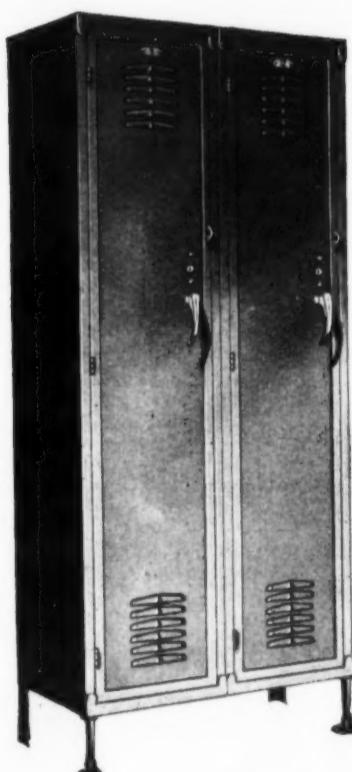


We have just furnished 101 of these to the Detroit Schools.
We have just furnished 60 of these to the St. Louis Schools.

MEDART STEEL LOCKERS

“Standard of Comparison”

Most of the features common in all modern lockers were originated and first offered by Medart . . . Even today, after years of keen competition, Medart leads the field with a number of exclusive and advanced features not to be obtained in any other locker . . . Contrary to popular expectations the cost of Medart Lockers is no greater than that of conventional type lockers . . . Before purchasing any locker, first inspect a Medart Locker and compare it with all others . . .



Write for Catalog

FRED MEDART MANUFACTURING CO.
3530 DeKALB STREET

ST. LOUIS, MISSOURI

Sales Engineers in all Principal Cities—Consult Your Telephone Directory

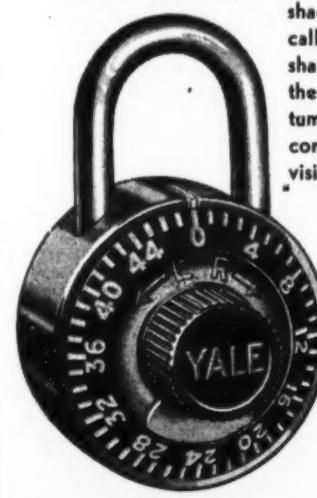
END ALL PADLOCK PROBLEMS THIS YEAR WITH

YALE

COMBINATION PADLOCKS

The name YALE on school locks, as on all others, is the symbol of security and dependability.

Three combination numbers are dialed—after dialing the third number the dial is turned to the right to a point where the shackle is released and automatically jumps open. Closing the shackle automatically deadlocks the hold and disperses all three tumblers. The utmost of security is combined with simple lockersupervision.



YALE
Combination Padlock
No. 579. (No. 589 has
emergency key.)

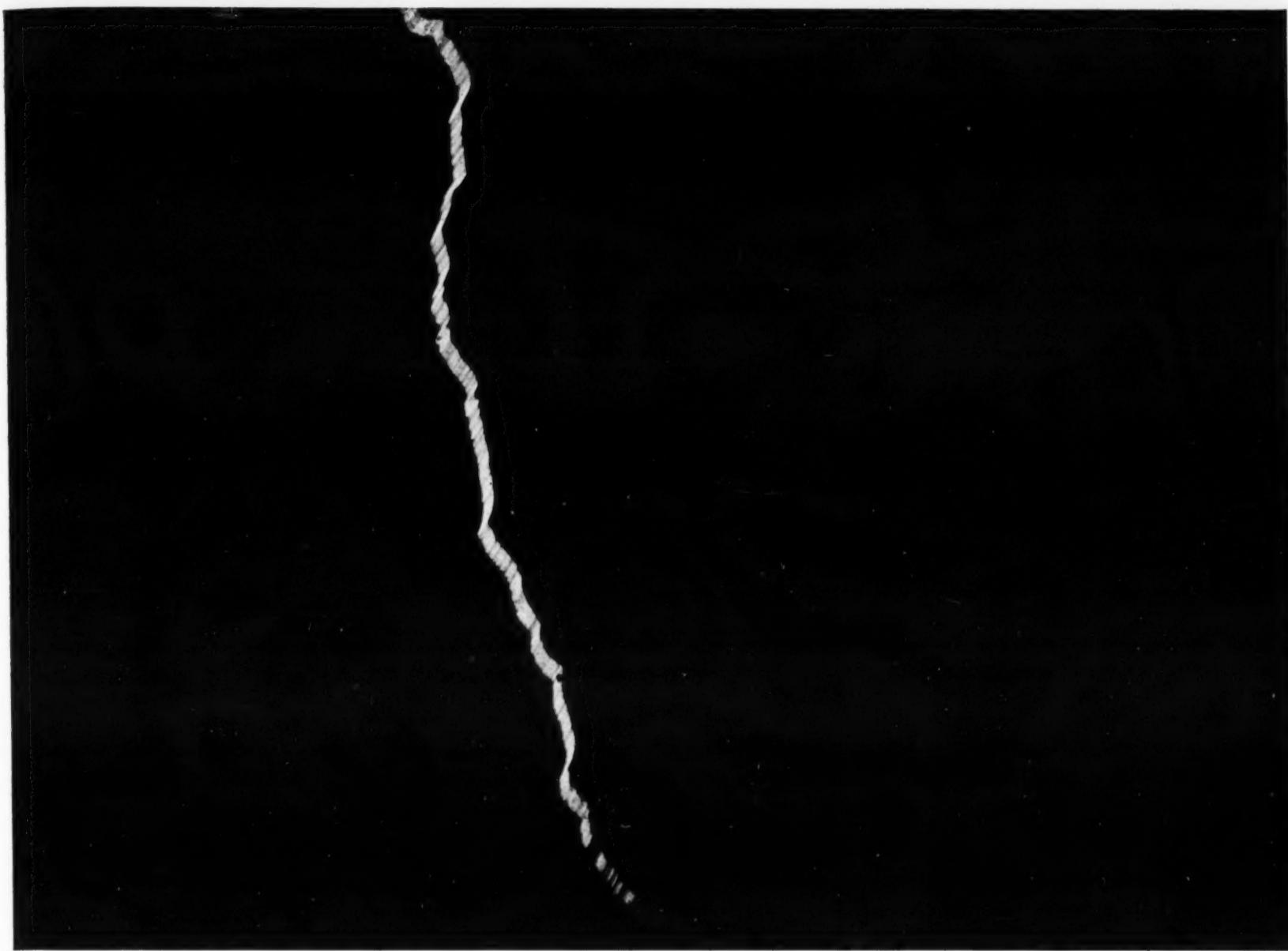


N E W

YALE Combination Padlock No. 429—moderately priced. Size 1-13/16". Nickle bronze case. Shackle is steel, cadmium plated. Dial is black with white numerals.

THE YALE & TOWNE MFG. CO.
STAMFORD, CONN.

U. S. A.



STORMS, FIRES, STREET ACCIDENTS CAN PLUNGE YOUR SCHOOL IN SUDDEN DARKNESS

EXPERIENCE shows that no locality is immune to the danger of electric current interruptions. Such occurrences often result from storms, floods, fires, street accidents, or short circuits and blown fuses within the affected building.

It is also true that a school plunged in sudden darkness is a place of potential danger. Fire, panic, possible personal injury may follow such an occurrence.

No greater precautions could be taken than those of the utility companies, but electric current interruptions of this nature are obviously beyond human control. A school itself can easily adopt a most economical form of protection. An Exide Keepalite Emergency Lighting Battery System will automatically safeguard an entire building against darkness—or can be so arranged that protection is localized at important points such

as assembly room, stairways, corridors, gymnasiums, etc. The security it provides at night is especially important during community meetings and on similar occasions. Operating cost is as low as one cent a day.

Mail the coupon for detailed information.

THE ELECTRIC STORAGE BATTERY CO.
Philadelphia

*The World's Largest Manufacturers of
Storage Batteries for Every Purpose*
Exide Batteries of Canada, Limited, Toronto

Refer to Sweet's Catalog, Section 27—Page 11

**WHAT IS
EXIDE EMERGENCY LIGHTING?**
An Exide Keepalite Emergency Lighting Battery System automatically and instantly supplies abundant light, to a single room or an entire building, in case the normal electric current supply fails. It is fully automatic and absolutely dependable.

**Exide
Keepalite
EMERGENCY LIGHTING SYSTEMS**
\$150 AND UP

MAIL THIS COUPON

The Electric Storage Battery Company
19th Street and Allegheny Avenue
Philadelphia, Pa.

Send me, without obligation, full information
on emergency lighting protection for schools.

Name _____

Name of School _____

Address _____

The Human Element in Industry

The human element permeates Industry. A prominent educator recently said, "I have come to a full appreciation that most corporations have a heart." Officers of companies in the school supplies and equipment Industry are high-grade men—very human.

They have injected that humaneness into their organization right down through the rank and file of officers and employees to the humblest worker.

They take satisfaction in their company, interest in their employees, and pride in their product. That spirit becomes contagious to the extent that employees also take pride in the product.

These workers are not slaves to a boss or a machine, but creators of useful and educative products that play so large a part in the educational training in our schools.

They have grasped to a large degree the fact that they are not dealing with wood and metal and paper and clay—they are dealing with materials that are a contributing factor in the educational processes.

It would be a revelation for an educator to visit some of the school supplies and equipment manufacturing plants—not so much to see and study the manufacturing processes, but to see and grasp the service attitude among employees.

The writer once visited a large high school in a metropolitan area and immediately sensed a wonderfully wholesome atmosphere. It was in the lunch rooms—it was in the halls—it was in the classroom—it was every place. Students and teachers readily explained that it was engendered by a very capable but decidedly human principal.

A similar atmosphere has been discovered in a number of manufacturing plants in this Industry.

It is the work of the executives of a company in the School Industry, not only to serve the stockholders, but also to "Serve the School Children of America". The latter spirit has grasped the employees to a remarkable degree.

The pupil does a creative piece of work. He is proud of it. He fairly expands when he is commended for it.

A teacher is a genius in the class room. She grows in the satisfaction of knowing a job well done.

A superintendent is a great organizer, but most of all a great leader by which leadership he brings forth the best that is in his organization and he grows in the realization of a job well done.

The football team plays a super game because it has the school enthusiasm back of it. The school buyer might well recognize that back of the school products are the men—back of the men, the company.

If the product is bought or sold on price, it is a reflection on the employees, their craftsmanship and on their company.

If it is bought on quality, it is a recognition of their craftsmanship, of their skill, and a recognition of their company.

There is no human element in cheap and shoddy products. They lack class—they lack serviceableness—they lack heart and soul.

There is a human element in a quality product. The interest and devotion of employees to their work and their company has put it there.

The human element plays a large part in the production of educative supplies and equipment. The School Industry possesses that human element.

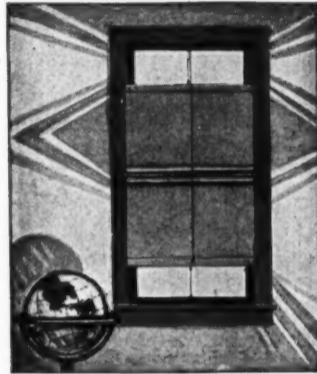


National School Supplies and Equipment Association

Room 312, Shop Section, Palmer House

CHICAGO, ILLINOIS

Replace
Worn Out Shades with
Draper SIGHT SAVING
Shades



Draper Adjustable School Room Shades keep the sun OUT but let the light IN. The patented Draper pulley bracket allows easy shade removal for cleaning.

Address Dept. AA for details and samples of Dratex Fabric.

LUTHER O. DRAPER SHADE CO.

SPICELAND

Dept. AA

INDIANA

Bassick
RUBBER CUSHION SLIDES



QUIET! SHOCK ABSORBERS

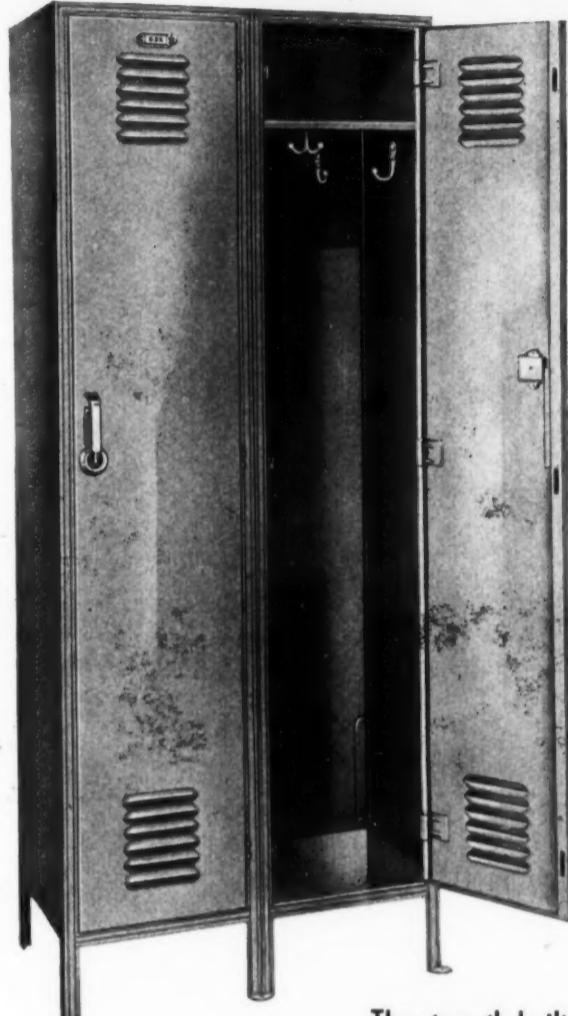
An economical necessity
on chairs and tables

These quality slides are ideal for easy, quiet, sliding action and for protection of floors. Write for free samples and try them.

THE BASSICK COMPANY
BRIDGEPORT CONNECTICUT

**Under the Severe Use of
School Children**

Quality Lockers



Lyon Steel Tier Locker.
Four-corner arc-welding gives permanent strength to the hard angle fluted frame and a true fitting door. Channel formations reinforce doors at points of stress that Lyon Engineers have learned in 30 years of Locker building.

Lyon Steel Folding chairs in one of the many comfortable styles and finishes supply portable seating in many schools.



The strength built into Lyon Lockers is reason enough for their preference by many school boards and officials.

Will the finish stand up under the treatment of young people in a hurry? Do the locks stay in working order?—the doors continue to fit?—Do they get noisy?—All these are logical points for the buyer's investigations—and points successfully met by Lyon exclusive locker construction features.

A score of structural refinements assure long life and minimum upkeep. Send the coupon for Locker Catalog.

LYON Service
SCHOOL EQUIPMENT
LYON METAL PRODUCTS, INCORPORATED, Aurora, Ill.

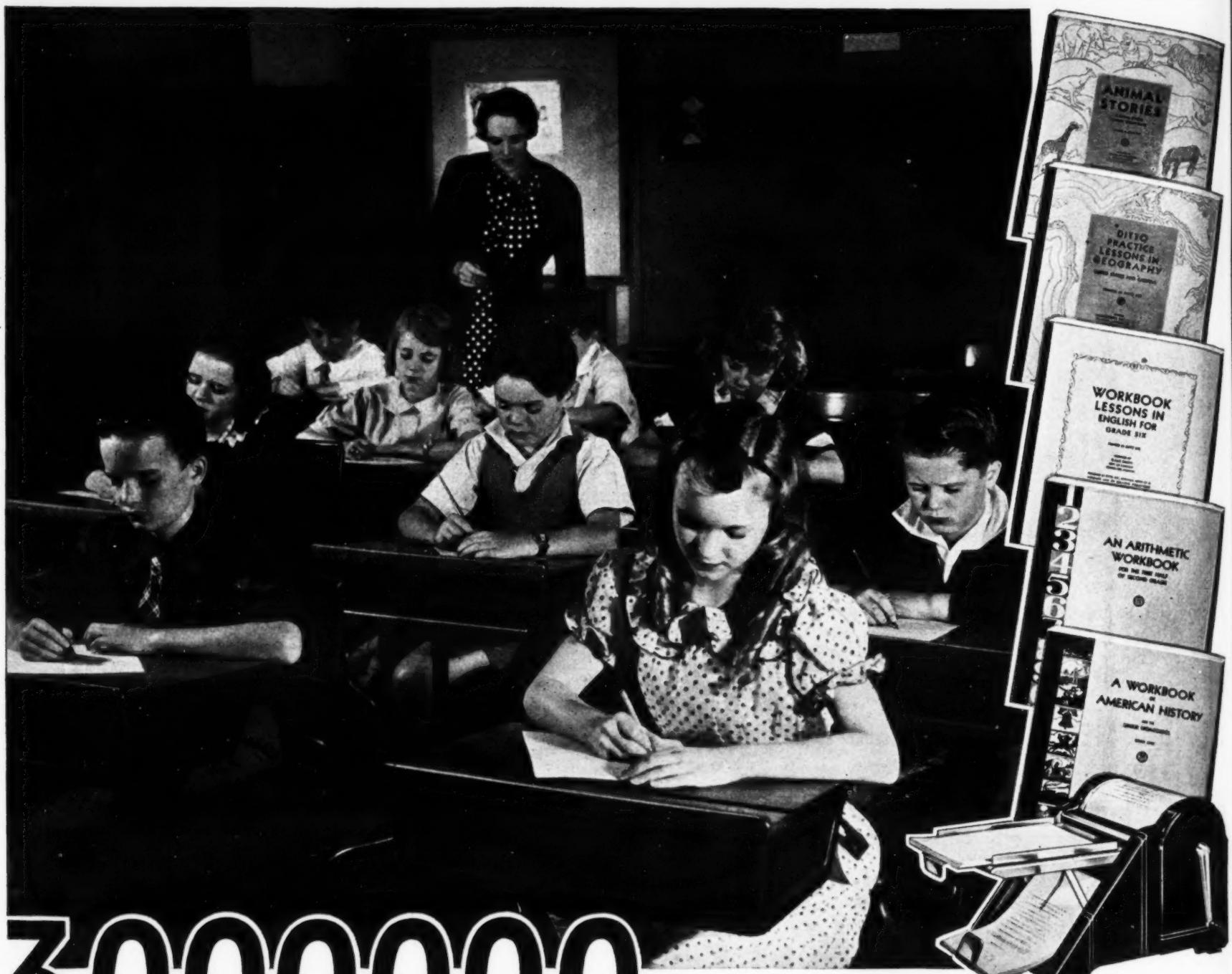
LYON METAL PRODUCTS, Incorporated, 1509 River St., Aurora, Ill.

We would like information without committing ourselves further on Lyon Lockers, as follows:

<input type="checkbox"/> Single Tier	<input type="checkbox"/> Box Locker	<input type="checkbox"/> Lyon Steel Chairs
<input type="checkbox"/> Two Person	<input type="checkbox"/> Gym Locker	<input type="checkbox"/> Lyon Locker-Wardrobe

Name _____ School _____

Address _____ City _____ State _____



3,000,000 CHILDREN WILL USE DITTO DIRECTED STUDY LESSONS IN 1936

GROWTH and successful achievement too often are taken for granted. We accept them as the reward of the popular acceptance of an idea, a method, a service or a commodity.

In reality, popular acceptance bespeaks merit, for few things abstract or real are accepted by you and me unless they have value, either in utility or beauty.

That the Ditto idea of printing Directed Study Materials in reproducing ink has met with great success, that its sphere of influence now includes thousands of schools and more than three million children is no doubt the result of the soundness of the method and the wisdom of its application.

Ditto Directed Study Lessons now number more than sixty books in practically every subject. They are prepared by master teachers and edited by an eminent editorial board.

Ditto Directed Study Lessons are fitting companions to the finest, most complete line of school duplicators you can find anywhere. There is a Ditto Duplicator that can do your work for you better, quicker and more economically than you are doing this work now; and you can buy one of these duplicators at a price you can afford to pay. No school—no teacher—can afford to be without Ditto.

Why not write today for our book "Emancipating

the Teacher." It tells the complete story, quickly, clearly. There's no cost or obligation.

DITTO INCORPORATED
610 S. Oakley Boulevard
Chicago, Illinois

Gentlemen: Please send me your book "Emancipating the Teacher" and more information about Ditto Machines and Ditto Directed Study Lessons.

Name Title

Address City

County State



Ditto, Incorporated

* * *

CHICAGO, ILLINOIS

VOL. 93
No. 3

SEPTEMBER,
1936

THE AMERICAN School Board Journal

A Periodical of School Administration

Western Office:
66 E. SOUTH WATER ST.
CHICAGO, ILL.

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
524-544 No. Milwaukee Street, Milwaukee, Wis.

Eastern Office:
330 WEST 42ND STREET
NEW YORK, N. Y.



TABLE OF CONTENTS

Cover: High School Library, Hollywood, California, PWA Photo	
Cartoon: Education (to the Teachers): "Don't Be Wallflowers!"	17
John Knott	
The Violative Supervisor, <i>J. R. Shannon</i>	18
Executive Responsibility in City School Administration	19
Theodore Lee Reller	
Research in the Solution of Practical School Problems, <i>C. L. Kulp</i>	21
Fundamental Principles in the Administration of School Health and Physical-Education, <i>Frederick Rand Rogers</i>	22
The Basic Problem of School-District Organization, <i>Ernest E. Oertel</i>	24
Some Problems in School Transportation, <i>Lloyd M. Theurer</i>	26
Wardrobes in Elementary-School Buildings, <i>Charles H. Gagen</i>	27
New Doctrine for Monroe—XXI, <i>Brooke W. Hills</i>	29
Pontiac Meets the Depression, <i>James H. Harris</i>	32
Long Beach Builds a New School Plant, <i>Will French</i>	33
Achieving Adaptability and Flexibility in a Junior High School Plant	37
<i>V. L. Nickell</i>	
The Glen Alpine High School, Morganton, North Carolina	39
Financial Economies of the Inglewood Grouping Policy, <i>Lionel De Silva</i>	41
Economy and Flexibility in Classroom Seating, <i>E. E. Morley</i>	42
Relation of the School Administrator to the Classroom Teacher	43
<i>Cornelius J. Heatwole</i>	
A Superintendent's Check List for Evaluating Elementary-Grade Teaching	45
<i>Mildred A. Dawson</i>	
School Museums at Federal Expense, <i>C. E. Hagie</i>	48
Professional Growth of Teachers in Coraopolis, Pennsylvania, <i>J. C. Werner</i>	55
Status Teacher-Rating in 1936, <i>Harry L. Senger</i>	56
School Improvement in West Virginia Through the County-Unit Plan	56
<i>Fred L. Teal</i>	
Working Policies for the Administration of a Small High School	58
Standardizing Janitorial Service in Alhambra, California	64
The Efficient School-Board Member	77

EDITORIALS:

Shall School Boards Employ Press Representatives?	46
How Accessible Shall the Superintendent Be to the Public?	46
Taxation and Adequate School Support	46
May Teachers Become Politically Active?	47
Professional Courtesy	47
What Should Be the Life of a Schoolhouse?	47

School Law, <i>Patrick J. Smith</i>	50	School Administration Notes	73
School Administration in Action	56	School-Board News	77
School Building News	63	Book News	81
School Finance and Taxation	68	After the Meeting	90
Personal News of Superintendents	70	Buyers' News	90
Personal News of School Officials	72		

Copyright, 1936, by the Bruce Publishing Company. All rights reserved. Title registered as Trade Mark in the United States Patent Office. Entered as Second Class Mail Matter in the Post Office at Milwaukee under Act of Congress of March 3, 1879.

Subscriptions—In the United States and possessions, \$3.00 per year. In Canada, \$3.50. In foreign countries, \$4.00. Single copies, not more than three months old, 35 cents; more than three months old, 50 cents. Sample copies, 35 cents.

Discontinuance—Notice of discontinuance of subscription must reach the Publication Office in Milwaukee, at least fifteen days before date of expiration. Notices of changes of address should

invariably include the old as well as the new address. Complaints of nonreceipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamp for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the *Education Index*, Member, Audit Bureau of Circulation and Associated Business Papers.

THE EDITOR

PLANNING A NEW LIBRARY?



Let Library Bureau's sixty years of experience be your guide. Mail coupon today for FREE booklets.

WHY go wrong with your school library, even in the smallest detail, when you have Library Bureau's whole fund of experience to draw upon at any time?

For more than sixty years this organization has been actively engaged in planning and equipping libraries. Today many a fine library in schools in every part of the land bears witness to the wisdom of calling in *Library Bureau when the plans are in the blueprint stage*.

Library Bureau's accumulated fund of experience is available for the asking to architects, superintendents, principals, librarians, and school boards. You are invited to write for any or all of these booklets—"Planning the School Library"; "How to Organize a Library"; "Library Supplies"; "Library Furniture". Write Library Bureau Division, Remington Rand, Buffalo, N. Y.

**LIBRARY BUREAU DIVISION
REMINGTON RAND INC.**

L-B FURNITURE STANDS THE TEST OF TIME



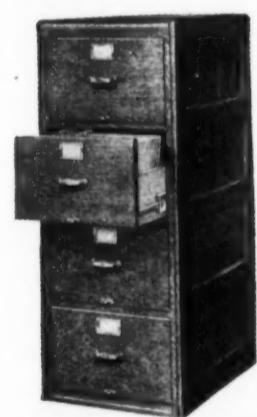
L-B Book Truck. Ball bearing rubber tired, noiseless wheels. Made of oak, sturdily reinforced for long and satisfactory service. Cat. No. 7607.



L-B Card Catalog Cabinet . . . 6 trays. Capacity 7200 medium weight cards with guides. Best quarter sawed white oak, cast bronze hardware. Order by Cat. No. 2336 R.



L-B Display Case. A sturdy case for displaying books that are new or of timely interest. A little over 4' high, 4' wide and 20" deep. Quarter sawed white oak, heavy built-up ends, even the back is of oak. Cat. No. 7076.



L-B Information File. 4-Drawer legal size, ideal for picture collections and pamphlets. Drawers 10½" high, 15½" wide, 24" deep, on ball bearing extension slides. Best quarter sawed white oak. Cat. No. 8210.

Library Bureau Division, Dept. P-59
Remington Rand Inc.
465 Washington Street, Buffalo, N. Y.

Please send me free, the booklet checked.

Planning the School Library
 How to Organize a Library

Library Supplies
 Library Furniture

Name.....
Address.....
City..... State.....

THE AMERICAN School Board Journal

Volume 93, No. 3

SEPTEMBER, 1936

Subscription, \$3.00 the Year



EDUCATION (TO THE TEACHERS): "DON'T BE WALLFLOWERS!"

The Violative Supervisor

J. R. Shannon*

Supervision of instruction is a relatively new science, and although supervision is conceded by our educational leaders to be the chief duty of most school administrators, the art of it is still undeveloped by the typical superintendent. The best field in which a superintendent can prove his proficiency to the school board is, as Lindsay has indicated,¹ that of school finance, but the one in which he will be most likely to convince his teachers of his merit is that of supervision. The supervisor must at least know enough about supervision to avoid inconsistencies between his precepts and his practices.

The typical supervisor in working with his teachers often violates the principles he admonishes them to follow in working with their pupils. Nothing can wreck his prestige with a group of alert teachers more certainly, yet he unwittingly persists in his error. He does so because he is uninstructed, and in his groping does not have time to think his way through to the point where he can systematize his behavior into a consistent whole.

A supervisor is a teacher of teachers. His relationships with his teachers should be much the same as those of the teachers with their pupils. The same principles of psychology and ethics that obtain in one place should obtain in the other. To list all of these principles would be a tedious and fruitless exercise, but to consider the ones which supervisors have been most prone to violate should be a service to the supervisor who might thoughtlessly err and to the teachers whom he would consequently offend. Considerations under only six headings, therefore, will be presented here.

A Sympathetic Attitude

1. *Rapport.* Thorndike's basic laws of learning, readiness, exercise, and effect, probably have been stressed by all supervisors in their admonitions to their teachers. The teachers have been told to keep their pupils happy, for learning as well as mental hygiene are facilitated thereby. Supervisors have emphasized the importance of sympathy, saying that it is the most essential trait of a successful teacher.² Teachers are told to be patient, kind, congenial, and helpful, and yet how often do supervisors neglect this same virtue in dealing with their teachers. Some supervisors, or rather "supervisors," even go so far as to hold the threat of dismissal over their teachers rather than try by kind treatment and scientific leadership to improve them in service. To those supervisors who cause their teachers to either curse or cry by their presence, LaRue addresses the injunction: "Treat your teachers as you want them to treat their pupils."³ The supervisor should be a servant to his teachers just as he expects them to be to their pupils.

2. *Individual Differences.* "The modifications in our school organization looking toward meeting the individual differences among pupils is the outstanding result of scientific educational research" during the present century.⁴ Most supervisors know this, but many do not generalize their recognition of individual differ-

ences to include the teachers. "The supervisor must recognize the individual differences of teachers just as he insists upon a recognition of the individual differences of children."⁵ "The teacher's background is the supervisor's point of departure."⁶

Many supervisors make a fetish of uniformity, some going to the extent of issuing lesson plans for teachers to follow. "We value highly the personal daily guidance of the teacher for the pupil. The guidance for the teacher by the supervisor is just as vital."⁷ Just as the wise teacher will encourage each pupil to think for himself, so will the wise supervisor encourage each teacher to think for herself.⁸ Any supervisor should let one of his mottoes be: "Others, too, have brains."

Helping Teachers Improve

3. *Gradation.* Experienced supervisors frequently have to warn inexperienced teachers not to expect too much of their pupils. "Heaven is not reached by a single bound." But who is there to warn the supervisor not to expect too much of the beginning teachers? Teachers' minds work the same way as pupils'. They can't be expected to learn any faster. One does not grow to be a perfect teacher in a year. Not too much should be undertaken at once in training teachers in service. One big thing at a time is enough. Teachers' meetings at the end of the day when teachers are tired can easily be held too often or too long. Personal conferences between supervisor and teacher can easily be prolonged beyond the point of diminishing returns. So long as a teacher with average endowments is trying to improve and is giving evidence of progress, the supervisor should be patient with her.

Supervisors often stress with their teachers the value of summaries at the end of recitations and reviews at end of units. If this is good pedagogy in teaching children, so is it in teaching teachers. Summaries at end of supervisory conferences and teachers' meetings, and periodic

⁵John K. Norton, "The Principal Studies His Job," *Research Bulletin of the National Education Association*, 6:96 (March, 1928).

⁶Elma A. Neal, "What the Supervisor Can Do to Encourage Scientific Attitude in the Classroom," *Journal of Educational Method*, 6:374 (May, 1927).

Many other prominent authorities agree with this point of view. Among those who have expressed themselves in writing in this vein are: William C. Bagley, Florence E. Bamberger, Franklin Bobbitt, Stephen S. Colvin, Ellwood P. Cubberley, Samuel T. Dutton, Earl Hudelson, William H. Kilpatrick, Leonard V. Koos, George C. Kyte, Walter S. Monroe, and Frank C. Sharp.

⁷H. J. Steel, "Time Activity Analysis Technique Applied to Supervision of Arithmetic," *Second Yearbook of the National Conference of Supervisors and Directors of Instruction*, Chap. IX, p. 144.

⁸A. S. Barr, "Research for Teachers," *Journal of Educational Research*, 20:42-3 (June, 1929).



SHALL HE BE GIVEN A PLACE IN AMERICAN SCHOOLS
UNDER THE GUISE OF ACADEMIC FREEDOM?
—Wisconsin News.

*Professor of Education, Indiana State Teachers College, Terre Haute, Indiana.

¹E. E. Lindsay, *Problems in School Administration*, Macmillan, 1928, pp. 511-14.

²J. R. Shannon, *Personal and Social Traits Requisite for High-Grade Teaching in Secondary Schools*, Indiana State Teachers College Press, 1928, p. 88.

³Daniel W. LaRue, "Mental Health and the Principal," *Journal of the National Education Association*, 18:187 (June, 1929).

⁴Frank W. Ballou, "Progress in the Science of Education in the Last Twenty-Five Years," *Addresses and Proceedings of the National Education Association*, 1925, p. 12.

reviews of matters covered in teacher-education are essential if teachers are to profit fully from supervision.

4. *Planning.* "Supervisors frequently emphasize the necessity of plans on the part of teachers, while they violate these same principles in their own work."⁹ Educational science and planning should prevail regardless of whether it is the teacher or the supervisor who possesses the science. Just as the teacher knows when she will meet a class and what the lesson plan will be, so should the supervisor know when he will visit a class and what he will be going to see. "Haphazard, occasional visits are of no value in supervision."¹⁰ Likewise, the other aspects of a supervisor's work must be planned. He must not flatter himself by thinking he can step in any time any place and observe a class, give a demonstrative lesson, conduct a conference or teachers' meeting, or direct professional reading without specific preparation. To do so would put him in the same class with the proverbial fool that rushes in where angels fear to tread.

Classroom Behavior

5. *Behavior.* Although standards of classroom decorum are less rigid than formerly, it is probable that most supervisors still disapprove of pupils' talking out loud without being recognized by the teacher, whispering loudly, pacing back and forth across the rear of the room, or attempting to take the class out of the teacher's hands and conducting it themselves. But reputable supervisors have been known to have made all these breaches of ethics while visiting teachers' classrooms. If rules of behavior are worthy of pupils' observance, so are they of supervisors'. When a supervisor is visiting a classroom he is a guest and a servant. He should enter and behave "as a humble student of education."¹¹

6. *Rating.* If the rating of teachers is a rightful function of supervisors, and such has been questioned, it should be done just as scientifically as any other phase of a supervisor's work. Supervisors emphasize with their teachers that pupils' marks should in some degree resemble the normal curve of distribution, and that each pupil's mark be arrived at thoughtfully. But supervisors do not practice these precepts in rating their teachers. Rating is carelessly done and nearly all teachers are grouped near the top of the scale.¹² If rating is worth doing, it is worth doing right. Supervisors should be as thoughtful in rating their teachers as they expect the teachers to be in rating their pupils.

The average run of supervisors are woefully, but not willfully, remiss in applying to their own practices the precepts they advance with their teachers. It has not occurred to many of them that they are inconsistent. They haven't been taught better and do not think about their own violative practices unless someone reminds them of them. It is the purpose of this report to serve as a reminder.

⁹C. R. Maxwell, "Effective Supervision," *School and Society*, 11:215. (February 21, 1920.)

¹⁰Jessie M. Hamilton, "Supervision by Principals" *Addresses and Proceedings of the National Education Association*, 1923, p. 547.

¹¹Charles H. Judd, "The Principal as a Supervisor of Classroom Teaching," *Addresses and Proceedings of the National Education Association*, 1926, p. 830.

¹²Ample evidence of this, based on a survey of teacher rating in Indiana, is contained in an unpublished study by the writer.

Executive Responsibility in City School Administration

Multiple or Dual Versus Unitary Control

Theodore Lee Reller*

PART I—THE NINETEENTH CENTURY

City superintendents of schools, professors of educational administration, and other leaders in education frequently urge the discontinuance of the practice of having more than one executive officer responsible directly to the board of education. They point to inefficiencies which result when such a dual arrangement exists. They believe that the chief executive officer should be the superintendent of schools—since he is the educational expert—and that the educational program is the purpose of the schools and the only tenable basis upon which to determine matters which exist to facilitate its efficient execution. This belief presupposes that the superintendent of schools is qualified to superintend all aspects of the service. Despite this general agreement among educators many dual and even more than dual divisions of executive responsibility continue to exist.¹ In fact, owing to financial difficulties, boards of education are at present tempted in some instances to move toward dualisms. These conditions warrant a brief examination of some of the factors which led to the establishment of a dual system of administration.

When, in 1867, J. M. Greenwood arrived in Kansas City to serve as superintendent of schools, he soon "discovered that his position required a versatile man, possessed of a splendid disposition, for his duties as superintendent not only called upon him to teach classes but also to oversee janitors, look after school grounds and patch fences."² His experiences with a wide variety of responsibilities were not dissimilar from those of many other early superintendents. In fact, some of them such as those of Louisville and Buffalo devoted their energies largely to the business affairs of the schools.³

The board of education and city councils, or members of these bodies, administered directly certain phases of the business of the schools in some cities for many years after the superintendency was established. In other cities an executive officer in charge of business administration directly responsible to the board of education, was a reality before or as early as the superintendent. This was the situation in Philadelphia where a superintendent of buildings was appointed many years before the school superintendency was established.⁴ It was true also in New York, where the secretary of the board had so many duties that a visiting committee from Boston reported that "his office is the center around which the whole work revolves, the point from which essentially everything emanates and to which it returns."⁵ The secretary's office was the center of the "material administration" of the system and the superintendent's office the center of its "intellectual and moral efficiency."

*Assistant Professor of Education, University of Pennsylvania.

¹See Part II of this study which will begin in the November issue of the JOURNAL.

²Galloway, D., *James Mickleborough Greenwood: An Evaluation of His Services as an Educator and of His Contributions to Educational Thought*, p. 11; Unpublished Master's Thesis, Washington University, St. Louis, Mo., 1931.

³Reller, Theodore Lee, *The Development of the City Superintendency of Schools in the United States*. Published by the Author, Philadelphia, Pa., 1935, pp. 267, 269.

⁴Philadelphia, *Annual Report, Board of Controllers*, pp. 23-34, 1868.

⁵New York, *Annual Report, Board of Education*, Appendix, pp. 5-6, 1867.

Early Dual Organizations

While there were some boards of education that administered directly the business affairs of the schools and others that at a relatively early date assigned such duties to an officer other than the superintendent of schools and not responsible to him, there were many cities where the superintendent was the chief executive officer in charge of business affairs as well as of the educational program. The reactions of the superintendents and those associated with schools in cities where in those earlier days a unitary system existed indicate a lack of appreciation of its advantages and the possibilities of development under it or a recognition of the fact that superintendents in many instances were not qualified to administer any aspects of the educational system other than instruction. A few illustrations will indicate the point of view of those interested in education at the time.

The superintendent of San Francisco urged, in 1867, the creation of the office of assistant superintendent, holding that, "unless the superintendent be relieved of most of those general business duties which he has now to perform, he must of necessity leave undone the most legitimate and appropriate duties of his office, to wit: the visiting of schools, advising with teachers and pupils, suggesting and illustrating improved methods of instruction, examining and promoting pupils, attending to the interior and special care of schools. This is the important work of the superintendent."⁶ The following year the same recommendation was made because of the belief that the superintendent's "real duties . . . superintending and supervising the instruction and education of the youths attending our public schools must necessarily be very much neglected"⁷ while he attends to business duties. These statements were not accompanied with the view that the assistant superintendent should be appointed by or responsible to the superintendent.

The superintendent of Rochester in urging the appointment of a superintendent of buildings responsible to the board of education, in 1871, stated: "The board of education have now in charge, city property to the amount of more than \$300,000, the valuation of which is steadily increasing, while each year there are additions to this amount by buildings, repairs, etc. The nature of the buildings makes it necessary that they should be looked after constantly. It will be conceded by all I think that the time of the superintendent can be more profitably employed *inside* the buildings."⁸

The superintendent of schools of Buffalo, in 1865, after pointing out that "the superintendent's time and attention are unavoidably diverted from the internal affairs of the schoolroom" on account of business duties, urged a modification of the charter to authorize "the election or appointment of an officer whose duty it shall be to supervise the making of repairs, the purchase of materials and supplies, and the construction of school houses, etc." He believed that "the adoption of such a measure would be a saving of expense—would promote the interests of the schools, and protect the rights of taxpayers. The expediency and econ-

⁶San Francisco, *Annual Report, Superintendent of Schools*, pp. 64-65, 1867.

⁷Ibid., pp. 51-53, 1868.

⁸Rochester, *Annual Report, Superintendent of Schools*, pp. 54-55, 1871.

omy of the measure, it seems to me, cannot be doubted, and they will become still more apparent when we consider the fact that the population of the city is rapidly increasing, and that . . . new schoolhouses . . . must be erected annually. . . . When our free school system was organized, the number of pupils attending them and the number of schools were comparatively limited; and the labor of overseeing them and supplying all their necessities was not a difficult task for one man to perform."⁹

Assistant Superintendents for Business Duties

In Washington, D. C., the president of the board of school trustees urged the appointment by the board of an assistant superintendent in order that they might "relieve the superintendent of the business details attendant upon the conduct of the schools." To illustrate the necessity of such an officer he stated that the superintendent is "required to devote fully one half his time to such details as ascertaining the necessity for and procuring details of repairs to the school furniture throughout the school buildings in his charge, the purchase and distribution of fuel to the different school buildings in his charge, searching for and arranging for the rental of school buildings, superintending the distribution and collection of free textbooks, furnishing minor supplies, and the like."¹⁰ If the assistant superintendent performed this work, the superintendent could then devote his whole "time for the more important work of supervising and directing the educational work."¹¹ Similar recommendations were made in 1898 by the president of the board of trustees.

In Chicago, in 1878, the president of the board of education stated: "The departments of business and of instruction should be divorced and kept as distinct as may be, in order that justice be done to both. The Superintendent should be permitted to give his time exclusively to purely educational matters and not be hampered with details that do not legitimately belong to his office."¹² In Detroit, as in a number of other cities, when professional duties became heavy it was urged that the superintendent be relieved of the duty of acting as secretary to the board of education.¹³

In Milwaukee the act requiring the superintendent to have experience in the art of instruction was considered important because supervision was regarded as "the appropriate work of the superintendent." It further provided for the appointment of a clerk to take charge of the office and do such work as the "board or superintendent may direct."¹⁴ An act passed in 1871, authorized the appointment of a secretary of the board whose duty it was "to attend to the general business of the department." The superintendent regarded the appointment of such an officer as absolutely necessary in order "that he might devote his entire attention to his appropriate and legitimate duties of visiting schools, advising with teachers and parents, and supervising the organization and classification of schools."¹⁵

These illustrations indicate that dualisms were favored by the superintendents and mem-

⁹Buffalo, *Annual Report, Superintendent of Schools*, pp. 24-25, 1865.

¹⁰Washington, *Annual Report, Board of Trustees*, pp. 11-12, 1894-95.

¹¹Ibid., p. 13, 1897-98.

¹²Chicago, *Annual Report, Board of Education*, p. 34, 1878.

¹³Detroit, *Annual Report, Board of Education*, pp. 11-12, 1871.

¹⁴Milwaukee, *Annual Report, Board of Commissioners*, pp. 49-50, 1866.

¹⁵Ibid., pp. 71, 1872.

bers of boards of education. This was partly because of the fact that the superintendent devoted his attention to details rather than to general policies as is the case in the well-administered school system of today. As a result of conditions and opinions of the type indicated, the number of cities with at least two executive officers both responsible directly to the board of education increased considerably during the period from 1870 to 1900. When the business management was established, as it was in many cities during this period, a number of factors operated against making this officer responsible to the superintendent of schools. Among them were: (1) the school superintendent had tended in most cities to become a narrow educational expert, little more than a supervisor of instruction; (2) there was a lack of men in the superintendencies who were interested in or able through training or experience to look after services other than teaching; (3) the superintendents were not yet regarded as men interested primarily in major policies of the system; and (4) in many cases boards of education as a whole or through committees were still performing executive functions and saw unity, not in a corps of trained experts, but rather in the board of education itself. Conflicts between the board of education, sectional or local boards, and the city council served to continue in the minds of the board members the idea of the importance of the board. This prevented the creation of offices and the election of responsible officers with large powers.

The lack of any unitary executive responsibility except as it existed in the board is clearly shown by a recall of actions of boards of education when new services or subjects were introduced. Thus, when compulsory attendance was started, some boards of education appointed a superintendent of attendance responsible only to the board or to a special committee. In other instances there were superintendents of music and of penmanship when these subjects were introduced. These officers were in some instances responsible only to the board or a committee. Thus the superintendent did not have responsibility for or in some instances even a voice in instructional matters. In the majority of cases, however, these executives independent of the superintendent were eliminated in a few years while the business management continued.

Independent Executives Favored

The idea of the two executive officers independent of each other was so widespread in 1897 that Boykin reported that the majority of American cities provided as "principal executive officers, a secretary and a superintendent; the former to look after the details of their business affairs, and the latter to take special care of all matters relating to instruction."¹⁶ A few quotations will indicate that the dual system was not only the one in vogue, but also the one regarded as most desirable by many leading educators.

Pickard, in 1883, said that "a system of public schools has two sides at least — the *business* side and the *instruction* side — distinct, and yet allied in defensive and offensive operations. Each needs watchful care that neither may trench upon the province of the other. . . . In our larger cities there is a favorable opportunity for an entire separation of those elements in administration. In the smaller cities there may be a twofold use of the superintendent — a necessity to be deprecated; and as soon as possible the superintendent should be relieved of all mere business duties, except as advisory in matters which bring business and instruction into close relationship. . . . But, even here . . . it is better that the action of each side

¹⁶Boykin, J., "Organization of City School Boards," *Educational Review*, p. 232, Vol. 13, March, 1897.



WILLIAM J. LOWRY
Superintendent of Schools, Springfield, Illinois

The man who has been called to direct the schools of Springfield, Ill., began his educational career in 1916, at Blackfoot, Idaho. He entered the army service and became an instructor of flying for about one and a half years. After leaving the service, he began teaching again at Belt, Mont., and went from there to Whitehall, in 1920, acting as superintendent there for thirteen years. From Whitehall, he went to Anaconda, where he was principal of the high school and assistant superintendent.

In 1935 he was awarded a scholarship in the advanced school of education at Teachers College, Columbia University. While there he completed the work for a doctorate in education, his major being school administration. During the past few months, he was employed under the supervision of Prof. H. B. Bruner, of the curriculum department, as director of a research project in curriculum, employing up to one hundred persons. Mr. Lowry entered upon his new work August first.

The Springfield board of education deliberated on a choice for superintendent of schools for some months, and finally selected William J. Lowry from among the many names under consideration.

should be entirely distinct, free from direct interference with the specific work of the other, and yet understood as affording moral support."¹⁷

Draper, in 1897, had a similar understanding of the problem when he said: "All details of administration should be separated into two great executive departments; one to manage the business affairs, and the other the instruction. The heads of these departments may be appointed by the board, but their terms should be long and perhaps indefinite and their powers should be wholly independent and fully prescribed by statute.

"The business department should have charge of all the property interests of the schools. . . . The head of this department must be a business man of good experience and well-known independence and probity who is strongly sympathetic with the noble ends for which the public schools stand.

"The department of instruction should be headed by an expert in pedagogical science and administration."¹⁸

B. A. Hinsdale and E. E. White also advocated for large cities the plan of having a business manager and superintendent independent of each other.¹⁹ A commission appointed by the mayor of New York proposed a law in 1894 providing for the appointment of a superintendent of school buildings and supplies, and a city superintendent, each for a term of five years. This element of the proposed enactment caused little comment; the law met its defeat because

¹⁷Pickard, J. T., "City Systems of Management of Public Schools," National Education Association, *Addresses and Proceedings*, pp. 70-71, 1883; or *Education*, Vol. 4, pp. 90-91, September, 1883.

¹⁸Draper, A. S., *The Crucial Test of the Public School System*, pp. 12-14.

¹⁹White, E. E., "Authority of the School Superintendent," National Education Association, *Addresses and Proceedings*, pp. 314-320, 1899.

of opposition of inspectors and trustees. It would have legislated the inspectors out of office and would have shorn the trustees of much of their power and patronage.²⁰

The Chicago Survey of 1897

The Committee of Fifteen in 1895 stated that the "circumstances of the case naturally and quickly separate the duties of administration into two great departments: one which manages the business affairs, and the other which supervises the instruction."²¹ The Educational Commission of Chicago, in 1897, recommended the appointment by the board of education of a business manager and a superintendent, both at a yearly salary not to exceed \$10,000 and under a contract for a term of six years.²² Concerning this report, S. T. Dutton wrote: "In what you propose respecting the two great phases of school management, that pertaining to the business and that of education, you have not only taken high ground regarding the centralizing of authority in the person of two competent experts, but you have placed around these executive heads such safeguards as will prevent possible abuses on the one hand and unnecessary interference on the other."²³

Despite the rather common recognition of the "two great concomitant interests — the one business, the other education"²⁴ — there was at times on the part of some a feeling of desirability of more concentration of responsibility. The president of the Chicago board of education felt this when he urged that the president of the board should stand at the "head of the school system, particularly in business matters, and that he should be responsible for what is being done."²⁵ The reorganization of the Cleveland schools, in 1892, with the school director, elected by the people, as the chief executive officer, appointing other officials, including the superintendent of instruction, was the outstanding instance of such a centralized program being put into effect. The school director was charged with the financial administration of the schools and had a veto power over the board of education, the responsibility of which was purely legislative.

So well was this plan received by educators that, in 1895, the Subcommittee on the Organization of the City School Systems,²⁶ with A. S. Draper as chairman, recommended the adoption in all cities of a plan essentially like the one then on trial in Cleveland.²⁷ Of the members of this subcommittee, Dr. Draper, president of Illinois State University, Poland, state superintendent of public instruction in New Jersey, and Powell, superintendent of schools in Washington, D. C., approved the plan in its entirety. Seaver, superintendent of schools in Boston, objected to the officer being known as school director, seeing no need for it and fearing that the officer would become part of a political organization and a dispenser of patronage.²⁸ The fifth and last member of the subcommittee, A. G. Lane, superintendent of schools in Chicago, did not desire to invest the veto power in the school director, but in general he approved of the plan suggested.²⁹ Further evidence of the acceptance of the Cleveland plan in principle is found in the report of the

(Concluded on Page 85)

²⁰Olin, S., "Public School Reform in New York," *Educational Review*, Vol. 8, p. 3, June, 1894.

²¹National Education Association, *Committee of Fifteen on Elementary Education*, p. 115, 1895.

²²Report of the Educational Commission of the City of Chicago, p. 21; p. 32.

²³Ibid., p. 14.

²⁴Chicago, *Annual Report, Board of Education*, p. 12, 1896.

²⁵Ibid., pp. 20-21, 1892.

²⁶National Education Association, *Report of the Committee of Fifteen on Elementary Education*, pp. 114-132, 1895.

²⁷Ibid., p. 122.

²⁸Ibid., p. 131.

²⁹Ibid., p. 132.

Research in the Solution of Practical School Problems

C. L. Kulp, Ph.D.¹

Teachers, supervisors, and administrators who are confronted on every hand by innumerable problems of the "practical" type, that is, problems which arise in connection with their daily tasks, have at least three possibilities for aid in their solution. These may be called: the trial-and-error method, borrowing, and the research method. The particular type used in a given case depends in large measure upon the training of the individual, the time at his disposal, and the importance or magnitude of the problem to be solved.

Many of the changes in American education have been made slowly, and at times rather painfully, as a result of trial and error. Some of these changes have resulted from a reasonable amount of legitimate experimentation in school office and classroom, carried on by teachers who wished to try theories of their own, which, after due reflection and study, seemed to be worthy of actual trial. Likewise, the theories of teaching, learning, or administration, formulated by others, have been adopted extensively because they seemed to be promising. Often these have proved to be no more valuable than older practices. In fact, it would be difficult to provoke an interesting discussion today by mentioning the merits of the "Austrian" method of subtraction, the use of phonetics in teaching beginning reading, or the practice of double promotions in the elementary school, despite the fact that these practices were vigorously advocated only yesterday as the proper solution to certain pressing school problems. Incidentally, we may say that rather intensive research following the adoption of these theories has revealed them to be of much less importance than their early sponsors believed. While we may concede that the trial-and-error method of solving practical problems has merit, we should face the fact that such procedures are often wasteful and unsatisfactory. Certainly, changes should be made slowly; as a rule, after controlled experimentation and measurement have established the superiority of the new idea, principle, or method. When we consider the present knowledge of handwriting which has been made available by research, and contrast this with the theory of free-arm movement of our youth, we see at once the value of research and the danger of trial-and-error use of subjective data.

Nowhere in the public-school program may be found a better illustration of the "borrowing" method of solving problems than in curriculum construction. Those at work in this field, on either revision of existing courses or construction of new ones, have turned frequently to the study of courses from other cities and states, with the result that many passages from good courses made elsewhere have been pieced together to meet the requirements for "something new" in the local school system. Unless intelligently directed, such practice may stifle initiative and creative effort, and produce courses devoid of sound educational objectives and of a common philosophy of education. To borrow the ideas of our neighboring teacher, school, or school system is an easy way to solve a pressing practical problem, but it is one which is quite unsatisfactory many times because transplanted ideas often experience the same handicaps to growth in a new environment which plants undergo in new soil. City "A's" method of reporting pupil progress and

growth to parents may be wholly unsuited to the needs of City "B." Likewise teacher "A's" technique in developing a unit study of food may be ill-adapted for use in the class taught by teacher "B." The borrowing method, then, may be valuable only when used in an identical situation.

Getting Objective Data

Research, in contrast to the above methods, is less concerned about theories and rule-of-thumb practices and more interested in getting objective data, *after which* principles and procedures may be established. "What is the truth?" becomes of greater importance than "This seems to be a good idea," or "I think that we can accomplish our purpose this way." The simpler techniques of research which have to do with assembling data and diagnosing the same, are known to many members of the staff today in any good school system. Graduate work involving research has been carried on by many who might be induced, with a little encouragement, to co-operate in the solution of practical problems through research. Committees appointed to study pressing problems sometimes employ research methods in collecting data fundamental to the solution of such problems. Probably a large amount of trained research talent in every school system is unnoticed and unclaimed so far as any practical use is concerned. An immediate, real problem to be coped with, undoubtedly provides a greater stimulus than any problem taken from the practice exercises of a college textbook. Study, reading, discussion of data, and scientific experimentation designed to improve current practice attract those who are little interested in "pure" research.

Practical problems arising in any school system are numerous. Teachers, supervisors, and administrators continually face new problems which result from changing conditions within and outside the school. Decisions are frequently based upon the known and recorded methods of others; sometimes upon experimentation and study. Committees appointed for the purpose of defining a problem and formulating a plan for its solution often utilize the research studies already in existence and make further studies through local experimentation with the conclusions of others. Sometimes the researches of others are used as the basis for a modified plan to meet local needs. Unfortunately, it is true that altogether too often the current practices in local school systems do not reflect the known truths revealed by the careful study of patient workers in the field of educational research. If all that is known to be true about many of our educational problems were to be practiced widely in our schools, a great improvement in the quality of the product would result. Within the school system itself, it is undoubtedly true that only a small group of individuals really have acquired the scientific point of view which encourages them to search for the facts and to use in the solution of their daily problems, methods which have been proved. Several years ago Buckingham² expressed the opinion that "as long as learning experiments are handled by psychologists alone, we shall make slow progress so far as education is concerned. Many psychologists are not even interested in education. Under these circumstances we have a lot of piecework but no quantity production. The only persons who can supply the need in this respect are the teachers. . . . The opportunity

to measure success in the learning and teaching of these subjects . . . an opportunity which the test movement has brought to us . . . enormously increases the range and variety of accessible problems."

Some Typical Problems

What, then, are some of the practical problems which arise in the school world almost daily to challenge those responsible for the education of our children, and what has research to offer in their solution? A few, selected at random, which have actually been attacked in some manner in one small school system are as follows:

1. What type of guidance program is needed to serve the boys and girls of secondary-school age in the City of Blank? This problem grew out of the realization that if a new program for high schools which was proposed, was to achieve the desired goal of adapting the offering of the secondary schools to the needs of individuals, a system of carefully planned guidance must be developed. With this purpose in view, a young man with appropriate experience and training on the graduate level was employed with the rank of vice-principal and charged with the task of studying the local guidance problem and eventually establishing a six-year program. A year was devoted to preliminary study by a committee directed by the vice-principal with the active co-operation of many interested teachers. Subcommittees carried out investigations to discover the guidance needs in the junior-high-school years; to formulate the philosophy of guidance which should control the local program; to consider the plans employed in certain well-known school systems and the viewpoints of at least two schools of thought as represented in well-known universities; to learn what became of graduates of the local high school after graduation; to study the educational opportunities available to the various types of students after graduation in technical, business, and other schools or colleges; to discover what types of training would serve those preparing for employment in the local community; to discover needs not met in the existing school program, and to suggest needed revisions or the addition of new courses. Before this study had been completed, pupils, teachers, parents, and members of the community had each furnished valuable information for the guidance committee, information which aided in the formulating of definite recommendations to the board of education, concerning the further development of its work in guidance. Research may be too dignified a term to apply to the work of this committee, but it is nevertheless true that they gathered objective data, diagnosed it, and then formulated their program.

In contrast with this school group type of study, we frequently have studies made by individuals, of which the following is a fair sample.

2. A study was made of the relative effectiveness of two types of standard arithmetic practice materials. The purpose of this study was to determine as accurately as possible, which of two types of drill material is most effective in developing skill in arithmetic computation and arithmetic reasoning. Fourth-grade pupils were used in this study, as that was the grade in which practice material of this type usually was introduced. Two forms of a standard achievement test were used to measure results, one in October and the second

¹The author who is city superintendent of schools at Ithaca, New York, originally prepared this paper for the meeting of the New York State Educational Research Association, December 26, 1935.

²Buckingham, B. R., *Research for Teachers*, p. 369 (1926).

in April. An attempt was made to set up as nearly as possible uniform and equivalent conditions for all groups. Without going into great detail concerning the techniques employed, it is interesting to note some of the results of the study of this practical problem.

a) Arithmetic computation material suited to the ability of the grade produced greater achievement than easier material of the same type designed for a lower grade.

b) The fact that practically all fourth grades were below the median for the nation suggested an earlier introduction of practice material, perhaps as much earlier as the second grade. (This change was later made and standards were raised as expected.)

c) The type of arithmetic practice material in use prior to this study was found to be less effective than the second type used in the study, with the result that the newer type was adopted.

A School-Costs Problem

3. An administrative problem encountered a few years ago grew out of a discussion of the relative costs of education in communities of similar size. As it was impossible to measure and compare the quality of the work in several systems, as related to costs, it was finally decided to study the scope of educational services and opportunities offered in about fifteen cities in the same general population group with the idea that the breadth of program would constitute a fair indication of the reasons for differences in costs. The cities included furnished information concerning such phases of the program as instrumental music, industrial arts, medical inspection, open-air classes, work for crippled children, real junior-high-school opportunities, work for mentally retarded and subnormal children; instruction in speech correction for those with speech defects such as stuttering, stammering, and lisping; home-arts classes, number of librarians, summer-school opportunities, night-school program; such other items, including total assessed valuation, tax rate and per cent of true valuation used for tax-rate purposes. When the facts concerning the educational opportunities, from the viewpoint of quantity at least, in the several cities were tabulated, one board of education con-

cluded that it had not been wasteful nor extravagant in providing for its children, and that it was maintaining a reasonably adequate program of educational services in comparison with the other cities of about the same size.

Two interesting studies, now being made, are concerned with methods of reporting school progress to parents and with the gathering of objective data from the business, professional, and industrial sections of the community concerning the training required for employment in each of these fields. Interestingly enough, much of the data required in the latter study will be collected and made available to the school by members of a local service or "luncheon" club which recruits its members largely from business, the professions, and industry. The first study, dealing with reports, is being made by a group which represents the elementary, the junior high, and the senior high schools. This committee will study the reports and the researches of others, will attempt to determine why reports are made to parents, what type of information parents wish to have, what type and number of symbols are to be used, what will be most meaningful and helpful to pupils, how to insure the fact that all teachers have the same concept of the report and that the same symbol used by different teachers will mean approximately the same thing. The personnel of this committee is such as to guarantee a careful, workmanlike product which will guide the staff in respect to one of the most vexing of perennial school problems. Objective data collected in the school system has indicated clearly the inadequacy of present reports to convey accurate, uniform information to parents concerning the school achievement of their children. Incidentally, this study presents a most profitable professional experience to the individuals who participate and serves to articulate the several divisions of the school system through study of a common problem.

The high-school commerce-department study, in which the service-club members will participate, will make available data needed in constructing a serviceable program of business training and will at the same time acquaint prominent members of the business community

with the objectives, equipment, and program of the commerce department. This, in turn, will aid in student placement after graduation in positions for which they have requisite training and aptitude.

Problems Solved by Research

The foregoing problems by no means exhaust the list which any paper of this type could discuss. Others which have actually been the subject of investigation and study in the same school system in recent years are as follows:

1. Length of school day.
2. School furniture for the open-air school, the auditorium, the library, the cafeteria.
3. Pupil-accounting procedures, life cards, guidance and health records, etc.
4. A program of directed study.
5. Evaluation of textbooks.
6. The insurance program of the small city school system.
7. Promotion problems and standards.
8. Teacher rating.
9. Ability grouping.
10. Methods of individualizing instruction.

Although the above examples may indicate rather elementary knowledge of research methods and problems, it is undoubtedly true that some of the techniques of research may be applied to the solution of practical problems arising within the school system. All such efforts properly begin with a study of available researches in the same field made by others, and frequently lead to the application of principles thus developed to the local problem. A reasonable amount of controlled experimentation is a legitimate phase of the local study. If during the year staff members are too busy to carry on needed research, why not encourage those who are studying in extension or summer courses to undertake an appropriate practical problem in connection with their graduate study? The chief value of these applications of research to the solution of practical problems may be found in the fact that those who voluntarily participate are kept alive professionally.

In answer to our question, "What has research to offer in the solution of practical problems in the local school system?" we may say that it is indispensable if our practices are to be based upon objective data and known truths.

Fundamental Principles in the Administration of School Health and Physical-Education Programs

Frederick Rand Rogers¹

In 1923 the writer was assigned by Professors Strayer and Engelhardt to conduct and report on the health-education phases of the Springfield, Massachusetts, school survey. From this experience and subsequent analysis came a group of administrative principles which were first analyzed and expanded in school-administration courses conducted at the Ohio State University. Later they were tested in various cities of New York State. In 1930 the writer, then beginning his fifth year as State Director of Health and Physical Education for New York, invited to Albany a representative group of superintendents of schools to discuss a reformulation of these "principles for the administration of health education in public schools." Among the cities represented were New York, Rochester, Syracuse, Albany, Schenectady, Binghamton, Bronxville, and Niagara Falls, all maintaining outstanding

school health services. These particularly well-informed administrators reviewed the agenda and approved the following statements as guides to the proper administration of school health programs.

These "fundamental principles" have been guides to practice and have been subjected to further criticism for the past four years. Therefore, they are precipitates of over ten years' constant review and checking against experience. No pretense is made to completeness in this list. Rather are these principles signaled out as of more than ordinary significance. They fall naturally under five heads: administrative organization, health protection, health teaching, physical education, interschool athletics. *Health* is defined briefly as *capacity for activity*. A pragmatic and pedantic definition of optimal health might be "that condition of any living organism, including its various parts and functions, which conduces to the greatest amount and efficiency of purposeful

activity." Emphasis should be placed on *active capacity*, rather than simply soundness of organic functioning and absence of diseases and defects which are largely negative aspects of health.

Most education *utilizes* capacities (to develop skills, knowledge, habits, and attitudes) which it is the purpose of health education to conserve and develop.

Administrative Organization

1. All school health staff services should be co-ordinated under a single directing head.

a) "Health services" should be interpreted as including all school programs and procedures which seriously affect the health of school children and employees.

b) The following staff specialists are primarily concerned with the health objectives of education: those school physicians who are employed by school departments, school nurses likewise employed, dental hygienists, school psychiatrists or mental hygienists, visiting teachers, supervisors of health

¹Dean of Student Health and Physical Education, Boston University.

teaching, supervisors of physical education, supervisors of cafeteria services. To these some of the most efficient school departments add the school-building upkeep staff, engineers and custodial service supervisors or directors. Some even add the psychologist and the attendance department. These additions are logical and function well in practice, as at Schenectady and Providence.

c) *Staff services do not include agents serving full-time under any principal, such as school nurses or physical educators assigned exclusively to one building.*

2. *The Co-ordinator or Director of Health Education should be: first, an educator; second, an administrator; and only incidentally, if at all, a specialist in any particular field of health education.*

a) Experience has shown that the most efficient co-ordinators of school health services have often been former principals or assistant superintendents in other fields. The appointment of health specialists lacking training and experience in other special branches is particularly dangerous. The medical man is likely to ignore health teaching, and is unsympathetic toward the social objectives of physical education; while the physical educator often emphasizes physical activity at the expense of other programs and fails to win or hold the confidence of school physicians, etc. However, the man of excellent executive powers surmounts his deficiencies in training. Outstanding examples of specialists who have successfully administered other functions than those in which they were trained are to be found in most of the cities named in the preface; also in Cleveland, Grand Rapids, Denver, Pittsburgh, Detroit, and a few other cities. The Providence plan of concentrating all the technical phases of health education under a director, who in turn is responsible to an associate superintendent, who in turn is charged also with the planning and upkeep of buildings and grounds possesses special merit.

b) Whether the co-ordinator be a health specialist or a general educational administrator, he should embrace every opportunity to familiarize himself with the philosophy and techniques of each branch of service under his direction.

c) Nothing less than the rank and salary of an associate superintendency is worthy of the co-ordinator of school health services. Perhaps even more than other school officials, physicians, psychiatrists, nurses, and physical educators are proud of their special knowledge and skills and jealous of their prerogatives. Consequently only the most tactful, as well as the most efficient, administrator can properly co-ordinate the work of these individualists. *Ergo*: he must be a rare bird—and will properly command a high salary. It is only simple economy to add the distinction and privileges of a commensurate rank.

3. *Where local conditions render undesirable the assignment of all co-ordinating functions to any single person, a health council should be formed.*

a) The health council should include a representative from each of the following groups: elementary-, intermediate- and secondary-school principals, home-economics and cafeteria supervisors, visiting teachers, nurses, attendance officers, physical educators, and health teachers, science teachers, academic subjects teachers.

b) The chairman of the council should be elected by the council or appointed by the superintendent of the school.

c) The functions of the council should be the determination of principles and procedures for all health education services, including curriculum construction.

4. *The health education personnel should be comprised chiefly of full-time agents.*

a) The practice of employing part-time physicians, nurses, coaches, etc., is defensible only in special circumstances—to conduct annual (fall) medical examinations, for example.

5. *The health-education personnel should be balanced in accordance with community needs.*

a) The tendency is often to overbalance in favor of some particular function, such as physical education (in most large cities); or medical service (in the New York State Education Department); or corrective activities (in Los Angeles). Unless definite procedures are followed to counteract, stronger departments will grow and weaker ones decline. For example, usually health teaching, a new but vital service, is neglected.

b) Recommended ideal personnel proportions are as follows: (It should be remembered that



MR. J. WILBUR WOLF,
Business Manager, Board of Education,
Omaha, Nebraska.

The board of education of Omaha, Nebr., following the death of Mr. O. T. Eastman, business manager, in June of this year, voted to co-ordinate the administration of the public schools, under Mr. Homer W. Anderson, superintendent of schools.

Following the change in organization, the board elected Mr. J. Wilbur Wolf as business manager. Mr. Wolf assumed his new duties on August 1, 1936.

Mr. Wolf was graduated from the high school in Omaha and later attended the University of Nebraska, where he was graduated from the College of Business Administration in 1925 with the degree of bachelor of science in business administration. He has been connected with the Otis Elevator Company for twelve years in secretarial, sales, cost estimating and promotional work, as well as in public-relations activities. He was employed by the Ford Motor Company in Omaha for a year, leaving in the fall of 1919 to enter the University of Nebraska.

Mr. Wolf is a trustee of his college fraternity, Pi Kappa Alpha, and is a member of Alpha Kappa Psi, national business professional college fraternity.

even if one cannot afford a nurse for every 2,500 pupils, one can afford to substitute a visiting teacher for the second nurse.)

(1) Co-ordinator—with other duties in school systems of 5,000 to 10,000 pupils; with no other prescribed duties in cities of over 10,000 pupils.

(2) School physicians—one full-time physician for the first 2,000–2,500 pupils; one additional full-time man or woman for each additional 4,000–5,000 pupils; part-time physicians to complete fall examinations with dispatch.

(3) School nurses—one full-time nurse for the first 1,500–2,000 pupils; one additional nurse for each additional 2,500–3,000 pupils.

(4) Visiting teachers—one for the first 2,000 pupils and one additional for each additional 2,500–5,000 pupils.

(5) Mental hygienist—one full-time for school systems of 20,000 pupils; part-time or consultation services for smaller systems.

(6) Supervisors of health teaching—some provision for supervision in all schools; one supervisor for the first 4,000–6,000 pupils; one additional for each additional 8,000–10,000 pupils.

(7) Physical educators—one supervisor of elementary-grade physical education for each 2,500–3,000 pupils, one teacher of physical activities for every 200–300 junior-high-school pupils, one supervisor or specialist in various phases of physical activity for each 300–400 senior-high-school pupils.

6. *When two or more specialists in the same field are employed, one should be trained in administration and supervision, the others should be trained in special branches as well as fundamentals.*

a) For example, in a junior high school of 1,000 boys, one physical educator should be administrator, as well as teacher of classes; one should be specially proficient in corrective activities; another in swimming or dancing; and the fourth in team sports.

b) The hours of service for health specialists should not be greater than those of other school officials performing similar functions.

Health Protection

7. *Medical examinations should be reasonably complete in scope, carefully conducted, and reach every child at reasonable intervals.*

a) It is a travesty on medicine to permit careless physicians to conduct one-minute inspections. Moreover, this procedure tends to destroy the regard of parents and pupils for the medical examination and profession. The Life Extension Institute or the American Medical Association ought to "do something about this."

8. *Medical examinations should be given first to the most urgent cases.*

a) In the following order:

(1) Pupils sent from classrooms by teachers or nurses because of immediate needs.

(2) New entrants (kindergartens and first grades should be examined in July and August).

(3) Pupils designated as "Class D" by physical educators' tests.

(4) Pupils engaging in interschool sports.

(5) Pupils with defects previously discovered and still uncorrected.

(6) Other fourth-, seventh-, and eighth-grade pupils.

9. *Medical and dental treatments should be confined to emergency services, except where no other agencies are available to parents, in which case the school department is justified in giving any treatment necessary to protect pupils' fitness to receive scholastic instruction.*

a) The temptation of school officials to provide medical treatments should be rigorously checked. These are private or public health-service functions. For schools to undertake them is improperly to weaken these other branches of public service. Would schoolmen look complacently on public-health department-conducted schools for children with physical defects?

b) On the other hand, if private or public health organizations do not meet pupils' physical needs, the school must do so itself, even to the point of maintaining hospitals; *for educational programs are futile if pupil-health is impaired.* "Health first" is a slogan which the writer has heard a bishop urge on his nun-teachers.

10. *Teacher health programs should be maintained in every school system.*

a) Medical and physical examinations should precede appointments; salary increases should be contingent upon maintenance of health; vacation and sick-leave benefits should be adjusted to the needs of individual teachers; and local school officials and boards of education should provide some recreation facilities and supervision for teachers.

11. *Every school program, method, technique, and policy should be analyzed for its effects on pupil-health; and readjustments indicated as necessary should have prior consideration by administrators and school boards.²*

a) These include particularly the hygiene of the plant; daily academic programs, recess periods, alternation of academic with shop activities and lunch hours, teaching methods, discipline, elimination of the practice and spirit of competition, modification of report cards and academic examinations—"the hygiene of the classroom and teachings."

Health Teaching

12. *The health teaching in grades 1–6 should be done by classroom teachers under the guidance of a trained supervisor.*

a) The practice of introducing specialists into classrooms, as was formerly done in music, is to be avoided.

b) The use of "textbooks in the hands of pupils" should be determined by local policy. In general, other procedures are more effective.

c) In grades 1–6 special periods for "hygiene" are less effective than incidental teaching of health habits—but only if teachers are properly supervised.

13. *In grades 7–9 a health councilor should articulate the health materials in the different subjects and work out a plan adapted to local conditions, by which all departments may participate in promoting the health-teaching program.*

14. *Hygiene instruction in high schools is necessary.*

15. *Medical examinations and nursing services*

²This is an added principle, not discussed by the New York State Superintendents.

should be so conducted as to develop in pupils sound hygiene practices and attitudes.

Physical Education

16. The protection and improvement of "capacity for purposeful activity" should be the prime objective and fundamental basis of pupil classification, and one of the measures of teaching efficiency for all physical-activity programs.

17. Physical-education programs should be rigorously adapted to individual pupil needs in all grades.

a) Adaptations to health or physical fitness needs should take precedence over others. Medical examination, physical fitness tests, and others should be given to determine needs and results of instruction.

b) Pupils whose physical development needs are greatest should be assigned to special corrective classes meeting daily.

c) Pupils in high school, whose physical fitness is high, should be permitted, under guidance, to choose their own time for and type of physical activity.

18. Equality of physical powers at least, and of total playing abilities, if possible, should be effected by directors of physical activities for opposing individuals or teams in all intramural sports.

a) The "doctrine of equality" is designed to promote the development of initiative, courage, perseverance, co-operation, etc.—the social

virtues. In effect, it also promotes more pleasure for players, protects health and guarantees continued interest in sports programs.

b) Intramural schedules should be duplicated on several levels of power or ability.

c) The most efficient and economical methods of equalizing teams should be used.

19. Boards of education should provide equipment and supervision for intramural sports as they do for other extracurricular activities, such as dramatics, music, and journalism.

20. In all extracurricular or elective activities teachers should refuse to make decisions for pupils, reserving veto powers only.

a) Especially should teachers, coaches, or directors require the pupils themselves to organize, officiate, score, and conduct intramural contests. Ideally they should do so for interschool sports also.

Interschool Athletics³

21. Interschool athletics events or meets should be planned, organized, and managed by pupils supervised by adults.

a) Such leagues as are formed should be officered by pupils with "faculty representatives" or principals exercising supervisory and veto powers.

³Properly this section is a part of "physical education," but its practical importance justifies separate treatment.

b) Leagues which cannot be so conducted are likely to be educational liabilities.

c) The principle of "player control" in the actual conduct of games should be enforced as far as is possible in all contests. Games in which such a policy is unwise should not be played by high-school boys.

22. The principle of equality between opposing teams should be rigorously applied to interschool athletics.

23. A policy of decentralization in the control of interschool athletics should be maintained.

a) State championships should be abolished.

b) Local championships and "climax" games should be abolished as far as possible.

24. For girls, interschool competition should not be encouraged except under the most informal conditions.

a) The spirit and practice of competition are particularly harmful to the proper development of feminine nature.

b) "Play-days" and similar friendly gatherings in the interests of mutual pleasure in physical activity should be stimulated.

25. The importance of insignia and prizes for victory should be reduced to the vanishing point.

a) A prize is payment for play and (psychologically) professionalizes the player far more effectively than the award of cash.

b) Prizes overemphasize the importance of victory and contradict the doctrine of equality.

The Basic Problem of School-District Organization

Ernest E. Oertel, Ph.D.¹

A cornerstone which has been refused repeatedly in the past by busy American educational builders is about to be made the head of the corner for a projected gradual reconstruction of our national educational system. This cornerstone is the hard, stubborn matter of proper school-district size. Both lay and professional workers in education, until very recently, usually have shied from this problem. Even though it has been realized, in some quarters, that unsatisfactory district size was responsible for a gross educational inefficiency and for excessive school costs, any corrective activity in this direction ordinarily has been stifled through the fear of disturbing sacred political boundaries or of desecrating a traditional reverence for local autonomy and thus creating public pandemonium. Only in very recent years has the issue been faced squarely on any extensive scale by a few intrepid frontier workers in educational administration. Probably their efforts should have proved futile except for a marked change in the temper of the times.

So long as the American public has had money enough to perpetuate its indulgence in small, expensive, and unsatisfactory local school units in the belief that it was preserving local rights and democratic principles, there has been little inclination to listen to the reformer who urged a rational consideration of this problem of district size. Of late, however, the pinch of economic reverses and constrictions has forced some states and communities to consider ways and means to operate their schools more economically and efficiently, if, indeed, they were to operate at all.

Significant organizational changes in some local districts have been effected, and in a few cases, at least, obvious resultant advantages have caused other states and communities to take notice and begin to wonder if they, too, might not be able to profit from local school-district reorganization. Thus, largely because of current economic conditions, there is a rapidly accelerating movement in the country to en-

gage in solving this foundational problem of working out a system of local school units of optimum size.

This present growing interest in the problem of establishing satisfactory school units does not mean that democracy in school government is on the decline. The "little red schoolhouse" with a single teacher is not necessarily the best guarantee in the present era for the exercise of the prerogatives of local democratic control. Sometimes, in fact, the maintenance of such an educational unit contravenes the actual virtues of democratic school government. Dr. Howard A. Dawson and others have pointed to instances where, because of faulty school district organization and defective legislation, 2 per cent of the voters have been able to frustrate the will of the 98 per cent in matters concerning the welfare of their children. The question may well be asked, Is such a state of affairs democratic? Democracy is best served when, somehow, the children of all the people are given as nearly equal educational opportunities as the resources and abilities of all the people will permit.

Waste of Small Districts

It has been obvious for some time, of course, that school-district size is related definitely to educational cost. It has been known—and known well—that the American public has been paying dearly for a supposedly intimate, close-at-hand self-expression in public affairs. Only a few days ago five New Deal cabinet members reported to President Roosevelt that American taxpayers are supporting 175,000 separate federal, state, and local governments. They declared in their report that this situation presented an "almost unlimited chance for confusions, cross purposes, and wasted effort," and recommended a government remedy. According to the 1933 report of the United States Office of Education there are 127,244 school administrative units in this country. This unwieldy number of units, it is readily apparent, is also responsible for much confusion, wasted effort, and unnecessary expense in the field of school government.

Now that some earnest attention at last is being given to the problem of correcting the more apparent weaknesses in existing school-district organization, it is necessary that far-sighted school administrators should give considerable thought to the matter of satisfactory standards for the size and organization of local school units. Before safe changes can be made in school-district organization some reliable basis upon which to make such changes must be worked out. There is already more activity in the direction of working out such standards than is generally suspected.

The business of building standards in connection with school administration, organization, and reorganization is not new. For many years persons engaged in schoolwork have been familiar with standards set up to govern practices and procedures through different phases of their educational activities. A whole profession has been built up as a result of standards that have been set up for efficient school-business administration. In recent years, standards for desirable schoolhousing have been worked out. A number of state departments of education now have their departments or divisions of schoolhouse planning.

As one reviews the history of recent educational practice in the United States, one is impressed by the extent to which educational procedures in practically all fields have been influenced and directed by standards of one kind or another. As education has grown in magnitude, as the number of students has increased, as school plans have expanded, and as techniques and methods have become more complex, codes and standards have had to be developed and followed. Education is no longer a process so simple that it can be described as being realized when the modern counterpart of Mark Hopkins sits on one end of the log and a student on the other. Yet, with all of its complexity, modern American education with respect to its basic organization is still permitted to run along in an anomalously haphazard, unguided, and hit-or-miss manner.

¹California Associate Director, Federal Study of Local School Units.

The Federal Study Under Way

As has been pointed out, it is only of late that the need for a statement of acceptable standards in school-district organization and reorganization has become apparent, and that something has been done about setting them up. A noteworthy federal study of local school units is being conducted at present out of the Office of Education in ten different Commonwealths of the United States; namely, Arizona, Arkansas, California, Illinois, Kentucky, North Carolina, Ohio, Oklahoma, Pennsylvania, and Tennessee. This fact presents fresh evidence that attention is being focused on this important and timely problem of developing some sound bases upon which satisfactory local school units may be proposed for initial school organization or for reorganization.

As a foundation for this federal study, certain preliminary declarations of standards have been prepared, such, for instance, as that one which calls for 240 to 280 pupils with six or seven teachers as a desirable minimum for a satisfactory attendance area, or another which postulates a desirable minimum of 1,750 pupils with 43 teachers as a satisfactory administrative and supervisory unit.

This present study comes as the culmination of a series of researches and studies sponsored by the Office of Education or carried on by members of its staff. In 1932, Monograph No. 8, published as Bulletin No. 17 of the National Survey of Secondary Education, was issued by the Office of Education. This monograph was entitled *District Organization and Secondary Education*. It was prepared by Fred Engelhardt, William H. Ziegel, Jr., William M. Proctor, and Scovel S. Mayo. Here was a first important official study of school-district organization looking thoroughly into the matter of standards.

In 1933, Pamphlet No. 45, entitled *Larger Units for Educational Administration—A Potential Economy*, was published by the Office. Timon Covert, author of this pamphlet, presented a review of what had been done in different states and counties in the interest of developing more efficient and more economical—and hence, larger—local school units.

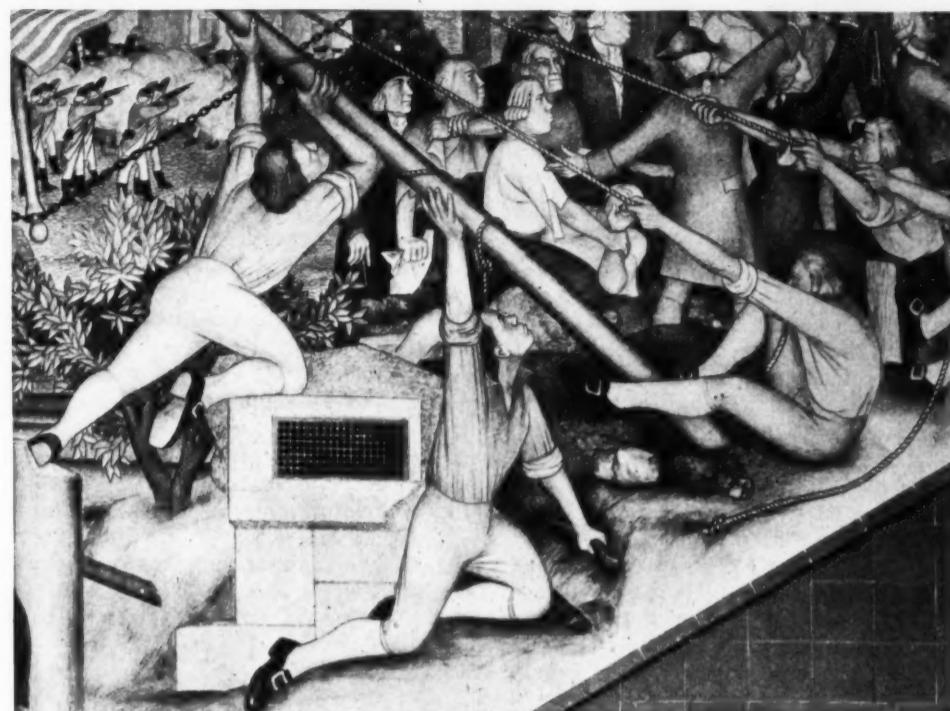
In 1934, Bulletin No. 3, written by W. H. Gaumnitz on *Economics Through the Elimination of Very Small Schools*, appeared. This bulletin revealed in a rather startling manner how many very small schools there are in this country and how costly it is to the taxpayer to maintain so many such schools. The study presented a plea for the elimination of small, unnecessary schools and the establishment of larger units of school administration, chiefly in the interest of economy.

In the same year, Howard A. Dawson wrote the epoch-making, *Satisfactory Local School Units*—that is, epoch-making in school-district reorganization history. Here was a first comprehensive, integrated study of standards for the formation, organization, and administration of local school units. This single volume integrates many of the separate and delimited studies on school organization and administration that have issued out of the educational researches of Teachers College, and out of field studies made by other private and state universities, and by state, county, and city departments of education in all parts of the country.

No Regimentation Wanted

After formulating acceptable standards, Dawson reminds the would-be reorganizer that local conditions must always be taken into account before standards may be applied. There is nothing arbitrary about the work. All publications in this field of standards for school-district organization or reorganization do, indeed, show a very marked distaste for arbitrary

WASHINGTON'S LIFE IN PWA SCHOOL MURAL



American high schools are the recipients of magnificent mural paintings through the generosity of the Works Projects Administration, which has assigned well-qualified but needy artists to paint historical or civically significant pictures in corridors, stairways, and auditoriums. The illustration above is a small section of a huge painting by Victor Arnautoff in the George Washington High School, San Francisco, Calif. The painting illustrates various important incidents in the life of George Washington. The coloring of the original is brilliant, the figure drawing full of vigor, and the composition thoroughly modern.

action. If all future workers in this new field are as cautious as these few researchers who have been formulating and setting forth standards, there should be no danger of charges of regimentation or bureaucracy being directed against their future efforts in school-district reorganization.

Gaumnitz declares in his study that there are 148,711 one-teacher schools in the United States; that 18,638 have an attendance of seven or less; and that 60,325 have an attendance of twelve or less. We learn also from the same source that one third of the high schools in the United States have an enrollment of less than fifty students, and that two thirds enroll fewer than one hundred. This author asserts that these small schools are from three to six times as expensive as larger schools and estimates that, were they eliminated, there could be a saving of from fifty to sixty millions of dollars annually.

In a reputedly progressive state like California, it is interesting to note that 1,371 of the active school districts or 49 8/10 per cent, employ only one teacher. Forty-four districts have fewer than six pupils. Five hundred and eighteen elementary districts, or 18.1 per cent of the active districts of the state have fewer than 11 pupils in average daily attendance. The need for more pupils in some districts has been known to prompt school trustees to employ teachers who have children of their own of school age in order to bolster the attendance to prevent the school from being suspended.

Mr. Sam Cohn, deputy superintendent of public instruction for California, is authority for the statement: "In 1934-35, 1,926, or 59 per cent, of the 2,736 elementary and union elementary-school districts maintaining schools (in California) levied *no* district tax, either for maintenance or building purposes. Twelve, or four per cent, of the 295 high-school districts, levied no district tax in 1934-35."

This significant announcement reveals to what extent in a relatively wealthy state like California, direct school support has shifted from the local district to the county and state—in this case, principally to the state. The implications of such a situation are obvious enough.

In the days when schools were supported practically altogether out of local funds, when there were only slight traces of county or state supervision, and when there were no minimum educational standards built up on state-wide or county-wide bases, it was possible for a one-room school in a more or less isolated community to function without being criticized for its educational limitations and economic extravagance. As minimum programs on state- or county-wide bases have been developed, however; as school support has shifted from the local community to the county and to the state; and as highly efficient school programs have been developed in the populous centers, so that their programs might be contrasted with those obtaining in the little one-room schoolhouses of from one to eight grades, taught by a single teacher, it has become increasingly apparent that each little school district, with its mere handful of children, could not well afford to set up its own standards for the educational development of its community and execute its self-formulated program without some regard for outside supervision and control.

State Programs Promise Betterment

When people pay the piper, they may call the tune. If taxpayers in some of the very small school districts were paying 100 per cent of the bills for their local education, one should hesitate to tell them how to reorganize their school system, even though in such case it might be highly desirable to do so. But when such local school districts are not contributing at all, at least directly, to the support of their schools, but are depending wholly upon state and county support, it seems reasonable to expect that the state or county, or some administrative unit larger than the one existing in the district itself, should start imposing minimum standards in the interests of the educational welfare of the state as a whole.

It seems reasonable to expect that a state can map out a better educational program for the state as a whole than could counties for and by themselves. Likewise, it seems reasonable to expect that a county can map out a better program for the county as a whole than individual school districts for and by themselves. The idea that a local school district of very small

size can map out an adequate program to suit itself is not convincing in these days when the population is so mobile; when graduates, more often than not, move out of the district in which they get their early schooling, and when school support and equalization programs rapidly are becoming matters for the county, the state, and even the federal government to deal with.

It seems unreasonable to expect that the American public school can go along as it did—with some excuse, perhaps—in pioneer days, with an unplanned, haphazard control exercised by small local communities through lay boards of education who hesitate and sometimes refuse to take into account the relationship of their educational problems with those of the people in neighboring communities, and in the county and the state. Local pride in having a school building, the love of local autonomy, and an unwillingness to transport children to larger schools, even in cases where good school busses could be available and where there are satisfactory or even excellent roads, are unsatisfactory reasons for retaining costly one-room, one-teacher school buildings for modern children who are entitled to educational advantages that can be enjoyed only in a school large enough to have facilities and equipment necessary to offer modern programs of instruction and essential social and extracurricular activities.

The time for the "little red schoolhouse" of one-room and one-teacher size has passed for a great majority of the children of America today. There are some cases, of course, where the very small school will have to be retained. Where transportation is possible, however, and where other factors permit consolidation and unification, there seems to be no excuse for the retention of schools too small to meet acceptable minimum standards for the presentation of adequate educational programs.

Evolving Standards Needed

It is patent, of course, that before any overt moves are made in any part of the country or in any part of a single commonwealth in the direction of school-district reorganization, there must be a careful consideration and formulation of what are regarded as acceptable standards for organization and reorganization. Such standards may be formulated out of a careful and critical review of professional theory already expressed; out of a careful attention to the integrated thinking of expert and lay opinion in the community, county, and state being studied; and out of a careful analysis of the condition of existing school units and the physical, economical, and sociological setting in which they are found.

A good start has been made in the integration of existing theory for the building of standards. We have pointed to some important studies that have been made available recently. The "Federal Study of Local School Units" is gathering some valuable first-hand information as to current practices in school district organization. In the end it should attempt, in the presentation of its findings, to point out the relationship between theory and practice. It will have an excellent opportunity to set forth batteries of standards that should prove applicable to the several districts covered by its analyses. Out of these batteries of standards there should evolve a set of general principles in school district organization and reorganization that should prove applicable to the country as a whole.

Although there is a present movement toward the building and setting forth of acceptable standards for school-district organization, and although it seems highly desirable that standards should be set up so that the evils, weaknesses, and inefficiencies growing out of unplanned, uncontrolled, and anachronistic systems of school organizations are apparent, it

must not be thought that school-district organization standards can ever be "fixed" instruments. They cannot be static, or finished, or "set" for good. By the nature of things, they must be dynamic, evolving, and subject to constant revision. No perfect rule or guide for action can ever be formulated that will in all cases successfully chart desirable organization for school districts in this country. American schools cannot be regimented. They must not be uniform or standardized. It is idle to think that school districts can be made to conform to a given pattern. Schools must always express the individuality and personality of the people they represent. Their offerings will be different and they will serve different communities and educational needs as demands for service differ from one place to another.

Avoiding regimentation, we should, however, recognize the desirability of building standards that will insure an improved education for the children of America. It goes without saying that the educational offerings of many of our schools today are not up to par. This is largely caused by this one major factor of improper district organization, as any careful study of local school units will reveal. America is spending more money than it should have to spend for the kind of school program that it is getting. By wise planning and intelligent action with respect to district organization, much stronger and more satisfying educational offerings can be realized.

To improve school standards for all school children in this country, we must, then, begin

by working out and applying new standards for school-district organization. The problem of district organization is basic and causal. We must, of course, deal first with cause if we would ultimately alter effects. Improved standards in curricula, school-business administration, and schoolhousing will be of only partial value until proper district organization can make an adequate foundation for other improvements—that is, until districts are large enough to provide and support the minimum demands of modern educational systems.

Organization and size of local school districts, are, therefore, *basic* to all other factors in educational progress. America has been operating on a narrow-gauge track of district system. It now needs to go to a larger and more nearly standardized track system. Individual school districts can express their individuality in the kind of educational engines and cars they use, but their educational roadbeds and track systems should match those of other school districts so that their children will have the ability to transfer to other communities, no matter how far separated from their homes, and be able to "take track." The principle of the equality of educational opportunity now demands a structural foundation for the nation's schools equally sound at all parts of its base and capable of supporting an integrated and co-ordinated system of education for the benefit of all American students whoever and wherever they may be. A narrow-gauge kind of school-district organization no longer fits into the modern network of our national educational system.

Some Problems in *School Transportation*¹

*Lloyd M. Theurer*²

School transportation in the United States has experienced a tremendous growth in extent and amount during the last decade. With this growth has come a marked improvement in the type of equipment produced and used for this purpose. It has represented a change from the old system of "get to school if and as best you can," whether by pony, horse-drawn wagon or sleigh, or by motor truck with a homemade seating contraption, to a system of comfortable transportation from home door to school door in modern, specially designed busses incorporating the latest features in safety, durability, comfort. All this has been done at comparatively low operating costs.

A report printed in the February, 1935, issue of *Bus Transportation*, shows that school-bus manufacturers have experienced an all-time record year. In that year they sold 9,403 school busses and approximately \$23,000,000 worth of busses were produced and sold. This more than doubled the number sold during the previous peak year 1934, of more than 4,582 busses, and is almost four times as many as were sold in 1933.

Citing figures taken from Bulletin R-20, 1935, representing statistical information issued by the office of the Utah State Department of Education, it is shown that in 1934-35, 38 Utah school districts operated 440 school busses, transporting 25,046 school children over 41,600 miles. A total of 1,367 other students were paid transportation fees making a total of 26,413 students receiving the benefits of transportation, at an aggregate cost of \$431,169. This makes an average cost of \$16.33 per student, as compared to the national average of \$18.71 per student.

In a comparison of the cost of this branch of the school budget with other special divisions of the budget, school districts for a number of years have expended a sufficient amount for transportation to place the auxiliary agencies of the department of the school budget third from the top in the total cost of operating and maintaining schools in Utah. In 1935, the sum of \$526,761 was charged to this expense, the cost ranging from no expense on the part of some districts, to an expenditure of over \$53,000 in Box Elder and Cache counties. The total cost of transportation in Utah represents slightly less than 7 per cent of the

total operating cost of the schools. In other words, this expense varies from nothing in some districts to as much as 18½ cents out of every dollar spent for operation in Cache and Uintah counties.

The cost of school transportation assumes an importance sufficient in scope to merit and demand the careful attention of every school administrator. It is a problem which, in the writer's opinion, has received too little study and attention at the hands of boards of education, and especially of clerks and business managers in connection with accounting practice and business management.

So far as the writer has been able to determine, there has not been devised up to the present time, any definite system of control of accounting practices for the costs and statistics incident to and necessary for a careful study of the operation and cost of school transportation. What does it cost to operate a school bus? What is being spent for gasoline, oil, and maintenance? What is the cost per mile? These and other questions are important to a comprehensive study of the problem. Answers to such questions frequently involve extensive flights into the realm of fancy. Thus today, the differences in conditions and practices put a limit to comparisons between this and other states. In Utah, various school districts have experienced difficulty in making out their statistical, financial, and state equalization reports which require certain data on transportation.

In the writer's opinion, some new and additional legislation is needed affecting school transportation. More adequate records, it is believed, would make it possible to secure the necessary information looking toward new legislation. It might at least be desirable to secure by means of periodical and continuing records, such statistical and cost data as would assist and make possible comparisons in at least a majority of the questions propounded.

1. What is the description and nature of the equipment operated?
2. What is the number of pupils eligible?
3. How many pupils are transported daily?
4. How many miles do the busses travel?
5. Are busses operated to capacity?
6. What is the quantity and cost of gasoline, oil, etc., for each bus?
7. How are busses maintained?
8. What system is used for checking transportation?
9. What is the average life of the bus?
10. What is the depreciation policy?

(Concluded on Page 85)

¹Abstract of a paper read before the school clerks division of the Utah Administrators' Conference, at Salt Lake City, Utah, March 14, 1936.

²Clerk, board of education, Logan, Cache County, Utah.

Wardrobes in Elementary-School Buildings

Charles H. Gagen¹

The grouping of specified numbers of pupils in elementary classrooms under the direction of individual teachers has made it necessary to provide for storing the clothing of the children within the limits of the classroom. In early American schools, a simple row of hooks at the rear, or at one side of the room, served the purpose. At the present time, improved hygienic standards and changed teaching methods have caused the development of facilities commonly known as wardrobes. Architects, school administrators, and manufacturers have contributed to the development of these wardrobes on new and high levels of efficiency and economy.

During the fourth quarter of the last century it was considered ideal to provide classrooms with cloakrooms for storing the outdoor clothing, lunches, and other belongings of the pupils. These rooms were usually as long as the full width of the classroom, were fitted with one or two windows, and were from four to six feet deep. The earliest cloakrooms had a door from the classroom and another leading

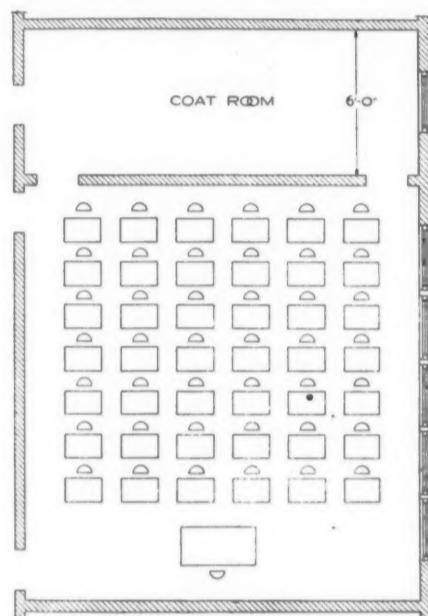


FIG. 1. TYPICAL CLASSROOM PREVIOUS TO 1910
The coat room occupies an unnecessarily large area.

into the corridor. Later the corridor door was closed and two entrances were provided from the classrooms. Shelves and hooks in fixed positions were placed along the walls for storing the children's wraps (Fig. 1). While this plan was found an improvement over the hooks in the classroom, it was costly in that the added space required an expenditure of from \$350 to \$400 per classroom. For the teacher there was some difficulty of control. As a rule, ventilation was poor because windows were never opened, and the cloakrooms became ill-smelling areas without air movement.

The next progressive improvement consisted of a plastered recess of appropriate size at the rear of the classrooms. Sliding doors were placed across the front of this wardrobe. The arrangement was such that as a rule four sliding doors could be recessed behind two fixed doors located at each end of the wardrobe. This improvement brought the clothing accommodations under the supervision of the

¹The author who is school-equipment consultant to the Berger Mfg. Co., does not attempt to discuss the relative merits of the various makes of wardrobes.

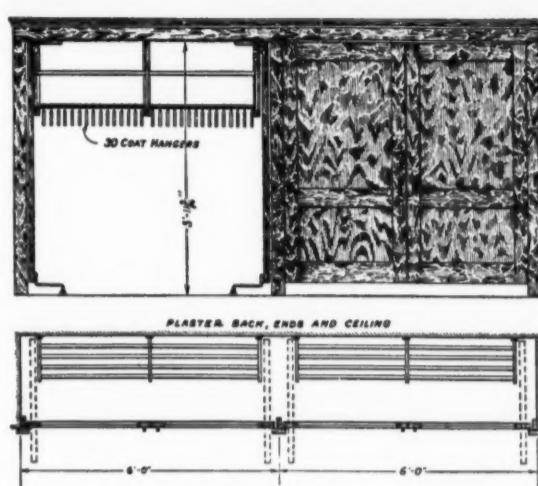


FIG. 3. A MODERN TYPE OF WARDROBE WITH SWINGING DOORS RECEDING INTO RIGHT AND LEFT POSITIONS

teacher. A considerable saving in building cost was effected, and this saving undoubtedly has been the controlling factor which has led to the further development of the classroom wardrobes. The main disadvantage of the early wardrobes arose from the unhandy sliding doors, but in 1917 and thereafter new types of doors were invented which thoroughly disarmed the criticism of teachers and school-administrative officials.

Wardrobes in Elementary Schools

Figures 3 to 7 inclusive illustrate developments in the arrangement and operation of wardrobe doors. Figure 3 illustrates a wardrobe, with doors arranged to swing open and to recede into right and left positions. The arrangement of the doors may be seen in the left-hand view. Shelves with coat hangers are mounted inside the wardrobe. Figure 4 is a wardrobe of similar type, with receding doors and with appropriate shelves and hooks placed along the rear walls of the recess. Figure 5 indicates a slightly different type of receding door which may be multiple-locked. In Figure 6, the doors of the wardrobe are pivoted on their centers and are operated simultaneously by a master door. The hardware for this arrangement includes multiple locks. A slightly different type of door, mounted on pivots and multiple-operated by a master door, is shown in Figure 7. This arrangement also permits of multiple-locking.

The wide and satisfactory use of these types of wardrobes and their interior arrangements for accommodating the pupils' effects have indicated that the wardrobe effectively solves the

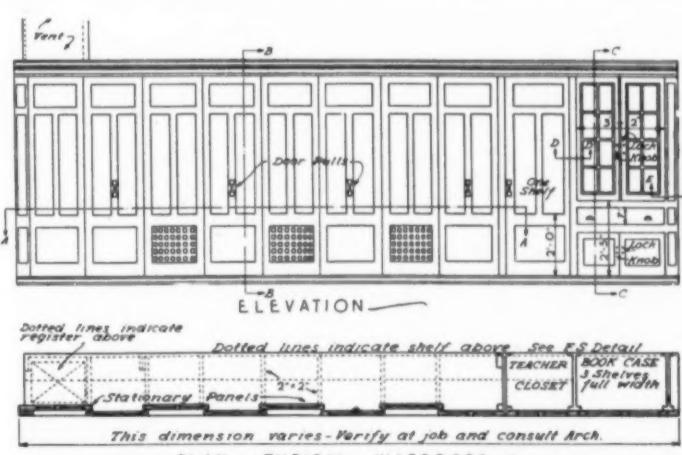


FIG. 2. A TYPICAL WARDROBE OF THE HOME-MADE TYPE WITH STATIONARY PANELS
The doors were "always in the way."

problem of clothing storage for elementary schools. In general, these wardrobes have been planned to solve five distinct problems:

1. Naturally the first consideration is to accommodate the clothing of the children.
2. An almost equally important service is the storage of teaching and pupils' supplies.
3. The wardrobe must include provisions for the garments of the teacher and for her personal belongings.
4. In many schools, there must be separate provisions for the lunch boxes of the children and for rubbers and umbrellas.
5. Economical and effective ventilation is necessary from the health standpoint.

Wardrobe Ventilation

In the modern wardrobe, the fifth problem enumerated above, that of room ventilation, has been solved with considerable satisfaction for all of the existing types of classroom ventilation. When the first door-type wardrobes were introduced, engineers found that a small opening at the bottom of the doors, combined

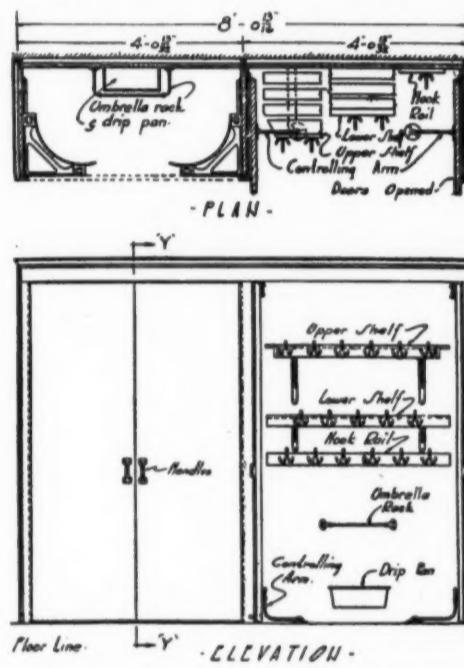


FIG. 4. A TYPE OF UNIT WARDROBE WITH SWINGING RECEDING DOORS
The upper and middle shelves are adjustable.

with exhaust registers leading from the ceiling of the wardrobe to the vertical outlet ducts or flues, would cause a natural flow of air into the wardrobes, up through the clothing, and out of the registers. Figure 8 illustrates the arrangement which is in common use and which

has been found most economical and generally acceptable under the laws of most states. A slight variation from this arrangement is in effect in Pennsylvania and in several other states, where it is required that the outlet register be placed in the wall of the vertical flue, just below the ceiling line of the wardrobe, causing a more direct movement horizontally through the wardrobe space. Universally, this upward ventilation of wardrobes is considered satisfactory and most economical, and is an integral part of the ventilation of elementary classrooms where wardrobes are installed.

A typical instance of this type of ventilation is described in the case of a new elementary school at Dallas, Oregon: "The old type of cloak closets

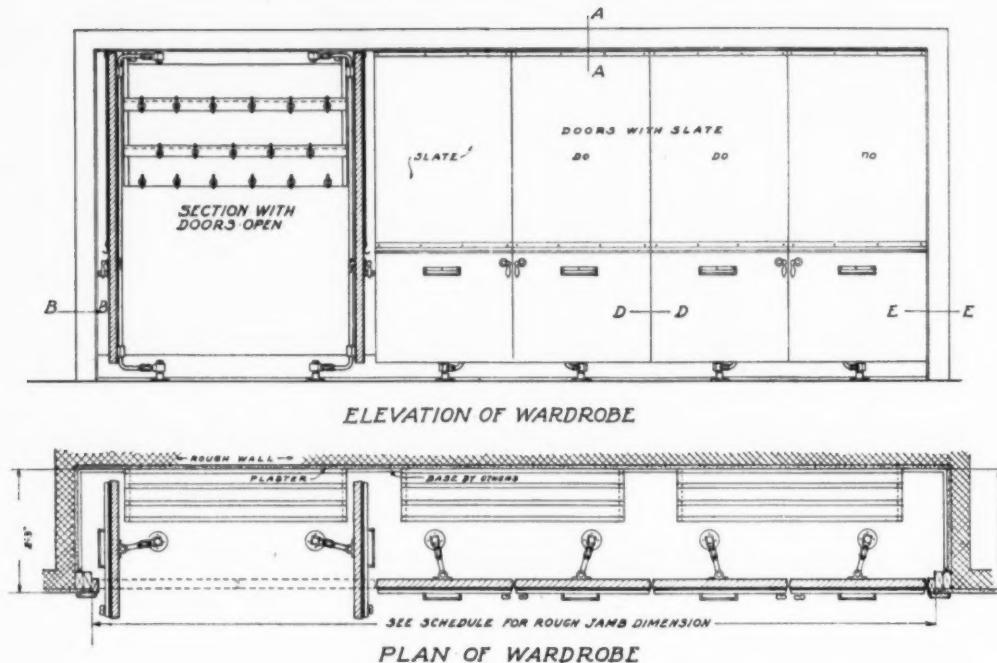


FIG. 5. A TYPE OF WARDROBE WITH RECEDED MULTIPLE-ACTION DOORS.

has been abandoned for newer ones, with disappearing wardrobe doors. These doors are so arranged that when opened, they do not project into the room, and when closed are covered with blackboard surface over the entire length of the wardrobe. The wardrobe doors are set up about 6 in. from the floor. In the ceiling of each wardrobe, there is a grille and duct, leading to a roof ventilator. This causes the heat from the radiators, which are under the windows, to circulate through and be taken off the floor through these wardrobes in such a manner that wet clothing hung in the wardrobes is dried without odors being carried into the classrooms.¹²

The ventilation of classrooms is so vitally important that the question may be raised whether the arrangement for exhausting the air from the wardrobes can be depended upon for a uniform flow of air and a positive means of carrying the same outdoors. The question is often asked whether the suspension method of storing the clothing does not prevent or retard good circulation of the air. Repeated instrumental tests of the velocity of the air at the point of entrance under the wardrobe door, and at the point of exit through the register in the ceiling, show that the flow of air is continuous and dependable. Even though the wardrobes have been loaded and the doors closed tightly, the drop in velocity at the point of exit in twelve installations has been found to be only 3 per cent over the velocity at the point of entrance.

¹²SCHOOL BOARD JOURNAL, March, 1936, p. 38.

The introduction of multiple-locking doors has added considerably to the perfection of this ventilating arrangement. Multiple-locking makes certain the uniform closing of all doors and obviates any possible short-circuiting of the ventilation through a partly opened door. When the wardrobe doors are all closed, the air is drawn off uniformly from the floor of the classroom through the bottom of the wardrobe doors. Multiple-locking of doors may, therefore, be considered as an essential factor in perfect ventilation of the wardrobes.

Multiple-locking has a further advantage in simplifying the control of the doors by the teacher and of saving her time when opening and closing the wardrobe. In elementary schools, the problem of "pilfering" is not an essential one and is not usually considered in connection with the multiple-locking devices.

Experience has shown that the free area for the entrance of air under the wardrobe doors must be from 400 to 576 sq. in. This space must be completely open and without interfering obstructions if complete satisfaction and freedom from odors and dampness of clothing is to be assured.

Clothing Accommodations

In planning for the clothing accommodations which are the effective reason for the existence of wardrobes, it will be found that a space approximately 13 feet in length will be ample to accommodate the clothing of the average class enrollment. Figures 4 and 5 show that

ample space for clothing is provided by means of shelves and hook strips, with hooks in fixed positions, and that these accommodations ample for 17 pupils, require a space 4 feet long. This method of clothing suspension permits of free circulation of air around the garments and has found such wide favor that it is commonly referred to as the "standard" method of clothing arrangement.

Inasmuch as classrooms are usually 22 feet wide, the arrangement for clothing suspension, just described, allows of ample space for additional teachers' closets, bookcases, and other arrangements for accommodating the supplies, the teacher's wardrobe, the lunchboxes and rubbers, and books used in the classroom.

For efficiency in respect to storing and removing clothing in the wardrobe space, it is necessary that access to the wardrobe be unobstructed at all times. This means that the design and position of the wardrobe, the pivoting and projection of the doors, shall be such that the rear aisle is free. Whether the door shall completely recede, or whether it may project from 1 in. to 8 in., are items of sales presentation by the various manufacturers of wardrobes. Careful consideration must be given to these points, and final judgment must rest with the school administrator and the architect.

Because classrooms have standardized widths, the element of economy of space as related to the length of wardrobes, is a matter of small importance. Economy of space is, however, very important from the standpoint of the depth of wardrobes. From the rear line of the classroom seats to the actual rear wall of the classroom is a rather limited space and must be divided between the aisle and the wardrobe recess as such. Wardrobes which require a reasonable and economical depth of recess area provide generous aisle space so that encroachment on this aisle space need be considered only insofar as it is caused by the door movements. The ample width of this aisle and free-

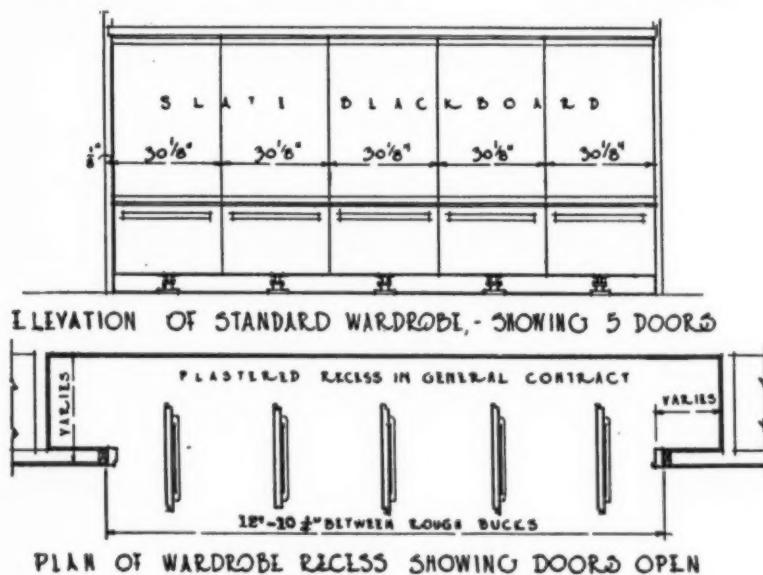


FIG. 6. A TYPE OF WARDROBE WITH FIVE DOORS

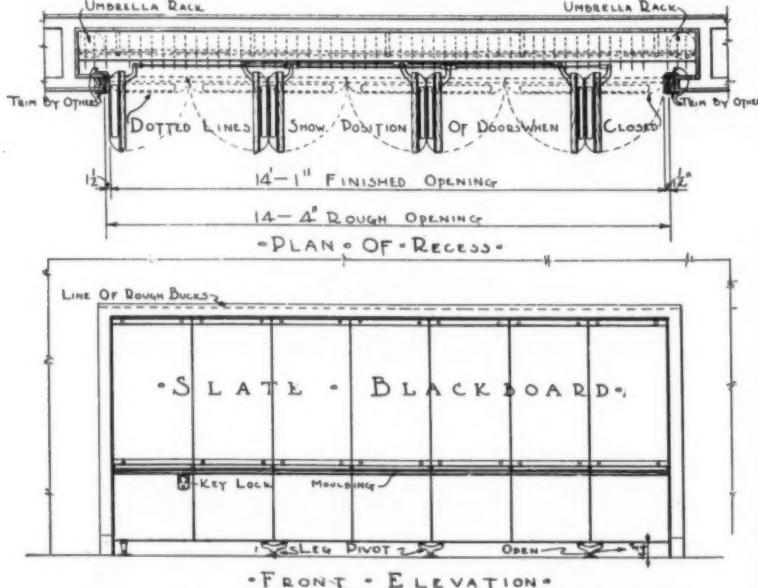


FIG. 7. A TYPE OF WARDROBE WITH MULTIPLE-ACTION DOORS

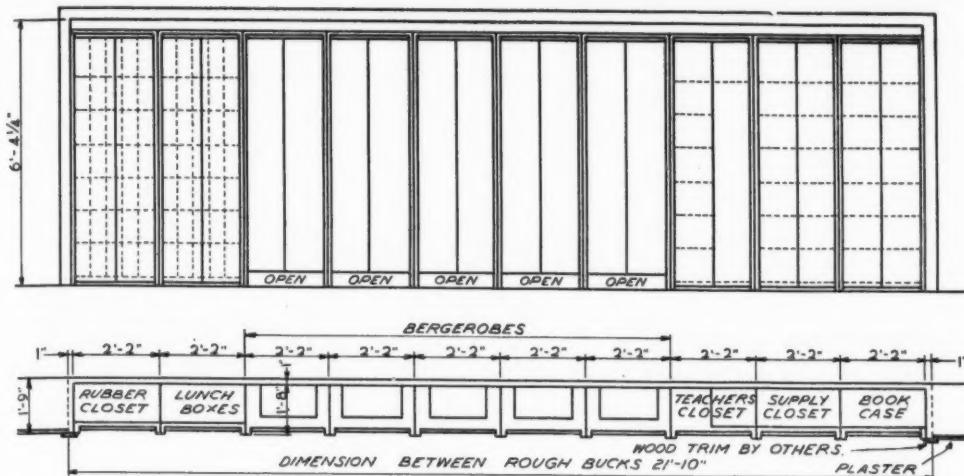


FIG. 9. A TYPE OF WARDROBE WITH FOUR DOORS AND WITH BOOKCASE AND CLOSETS ADJOINING

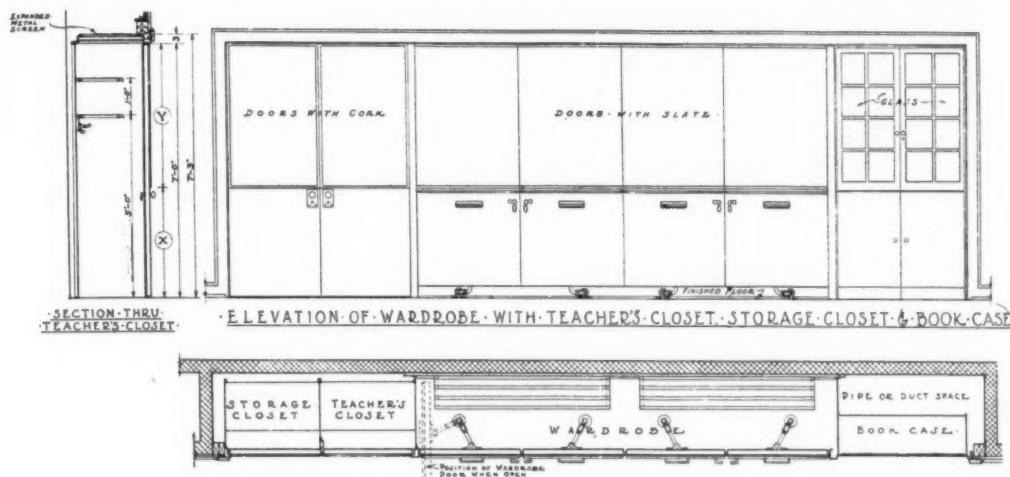


FIG. 10. A FIVE UNIT WARDROBE WITH RUBBER CLOSET, LUNCH BOX CLOSET, TEACHERS' AND SUPPLY UNIT AND BOOKCASE

dom therein contributes to the orderly movement of the pupils.

The actual depth of the recess is controlled in part by the ventilating system, because in many cities the duct which is placed above the wardrobe inside the plastered wall, must have a width of not less than 20 in. This width is considered necessary for the proper flow of air. Thus, the actual depth of the wardrobe recess cannot be less than 21 in.

Additional Essential Requirements

School administrators and architects usually set up eight additional requirements for wardrobes: (1) They demand that the wardrobes shall be economical in installation. (2) They ask that the maintenance shall approach the vanishing point. (3) Substantial and well-made hardware often determines the success and the

acceptability of wardrobes. (4) The doors must be rigid when closed; this point is particularly important when blackboards are mounted. (5) The hardware must be of a type that obviates adjustment no matter what the usage and years of wear. (6) For easy movement of the doors, ball-bearing mounts are required. (7) The hardware must be mounted so that it is entirely safe in use. (8) The entire wardrobe must be easy to clean.

School administrators also request at least three additional use-values in wardrobes:

a) Adjustable shelves are considered necessary. Changes in the organization of a school and possible future additions make it desirable that the clothing shelves be raised or lowered to meet the exact age and size of the children accommodated in the classroom.

b) A numbering system for the hooks con-

tributes to the efficiency and the orderly movement of the clothing and gives each pupil a fixed position or a "right to possession" to a certain hook.

c) Hooks placed parallel with the shelves seem to be a good improvement over hooks protruding to the front. A properly designed, 2-prong hook, placed as suggested, gives two hooks at each hook position and adds to the safety of the wardrobe.

The Operation of Doors

The experience of nearly a generation has indicated that the individual operation of wardrobe doors is a source of annoyance, a cause of maintenance expense, and a direct harm to the ventilation. The multiple operation of doors, although considered a fascinating novelty at one time, is now held to be of great importance because it eliminates the children from the task of opening and closing the doors. Multiple-door operation provides complete access at one movement and substitutes a safety bracket for the older type of dangerous door movement. A teacher or a selected monitor is in control. The orderly operation of the classroom is promoted and, as indicated above, good ventilation is assured. If the doors are multiple-locked, practically the final consideration for efficient equipment is made a fact.

The problem of accommodating supplies is not a difficulty, if 12 or 13 feet of the classroom width is given to actual wardrobe space. A wall area 9 or 10 feet long and not less than 21 in. deep is ample for providing supply and teachers' closets and compartments for rubbers and pupils' lunches. Is there anything more unsightly than to find these articles thrown on the wardrobe floors?

For wardrobe construction wood and steel equipment is favored by the manufacturers. The merits of one as against the other are not discussed here. In Figure 9 is shown an installation, in which the storage closets and bookcase are of steel, while the wardrobe doors may be had in either wood or metal. Again in Figure 10, an installation is suggested which is entirely made of steel, and which includes separate compartments for rubbers and lunchboxes. As in Figure 9, the doors are of the receding type, multiple-operating and multiple-locked.

The heights of wardrobes supplied by the various manufacturers range from 6 ft. 3 in. to 6 ft. 6 in., the difference depending somewhat on the hardware and the mounting of the doors.

From the foregoing, it may readily be seen that wardrobes have rather well-defined standards of ventilation, clothing suspension, and height.

Busted Backs, Visiting Delegations, and a Gentleman with Brains

Brooke W. Hills

New Doctrine for Monroe—XXI

I

In this narrative of the vexatious troubles besetting Mr. Smith B. Hamilton in his attempts to set up a new doctrine for Monroe, we have indicated that a number of persons living in this delightful community had made it their business to attend the evening's entertainment about to take place at the high-school building. The word *entertainment* is advisably chosen; certainly, the final and public show-down in the case of the *Board of Education vs. Jackson R. Tyrone*, seemed to many residents as promising a thoroughly interesting evening's diversion. . . . It was not *their* bread and butter which was at stake; hard, very hard, for the average man to realize the difference between

comedy and the anxious desperation of two opposing figures virtually fighting for their lives. The average man just doesn't realize, simply because he is not personally involved. . . . "Yeah, I hear both have got *lawyers*, and I betcha the fur'll fly." . . . Entertainment? Yes, real entertainment, except for the actors; and not so real, either, for the parents of the boys and girls, who were anxious to see an end made of the storms which had tossed about the schools of Monroe so many years.

There were some who took this evening seriously.

And there was one who took this evening seriously enough, one who had worked and schemed and fought for weeks to control what was about to take place; one who normally would have been among the first arrivals at the scene, but who was missing from the groups making

their way to the school and from those tramping to seats in the room set aside for the hearing. True, he arrived eventually; but he was late, very late indeed.

We are referring to the proprietor of the *Monroe Item*, none other than Editor Short.

II

Mr. William Dobson pushed his chair back from a thoroughly satisfactory breakfast, lighted a cigar, brushed a few crumbs from his ample vest-line, and cocking his eye at his wife proceeded to review aloud the important matters which might concern him that day.

"Let's see," began Mr. Dobson, "I got to take another twist at old Stu Retaylor, or that sucker will have my arithmetics out and his in. He's been raising Cain, ever since they gave him a couple of new counties down there along the river. And then I'll have to skip over to the Main Line and sample a few of the boys; I'll get Bill Arlington to have a bite of lunch with me, and most likely he'll loosen up on what he knows over in *his* neck of the woods. And then, . . . and then," his chin sinking further into his collar as he struggled to recall something, "By jings, I doggoned near forgot it! My, that *would* have been too bad," and Mr. Dobson shuddered.

"*What* would have been too bad?" patiently inquired Mrs. Dobson, who, for thirty years now, had listened to these morning broadcasts.

"Why, I darned near forgot that hearing over in Monroe tonight. Gosh!" With another convulsive shudder, Mr. Dobson bounced to his feet, grabbed at his hat and brief case, and made as rapid an exit as was consistent with his ultra-Napoleonic dignity and not so ultra-Napoleonic proportions. Two minutes later his wife saw the well-traveled coupe roll down the drive, bearing away to other places the more than well-traveled Mr. Dobson.

Delightful was the morning; delighted was Mr. Dobson as he contemplated new opportunities for the exercise of his talents in maintaining the high repute of bookdom, the sovereignty of his own textbooks, and the general prosperity of the great state which he represented. It is possible that the song in his heart might have found expression on his lips had there not been one of those unexpected interruptions in the current of the day's affairs, calculated to tax that type of mind which enjoys greatly the business of getting into scrapes for the greater enjoyment of getting out of them. In this interruption, fully ten minutes of the most careful and painstaking explanation on the part of Mr. Dobson were required before he could convince a bewildered gentleman in blue with a particularly loud police whistle, that the fault was entirely that of the reckless driver in the fast car which had long since disappeared over the horizon. An explanation which elicited from the guardian of safety the admiring, "Well, that's the best sales talk I've heard this year" . . . but, as the modest, Mr. Dobson lingered to gather fresh laurels, an anything but admiring, "What's the idea in your trying to park here all day just to hear yourself talk, and will you kindly get that crate going and let this traffic that's backed up about five miles get started, an' I don't want to hear nothin' more out o' you." . . . It was some time before other pleasantries incident to travel restored the injured spirits of Mr. Dobson to normal, and brought again to his guileless face the smile which usually portrayed his peace of conscience. . . . "Humph! That cop says I gave him the best sales talk he's heard this year; I must remember to tell the boss that, when I see him Saturday." . . . Yes, once more was the morning fair; fair again was the field for the full exercise of his ingenious mind, as the hours swept past and Mr. Dobson converged on Monroe in general and the Jackson R. Tyrone hearing in particular.

III

It was late in the afternoon of the same day in which these stirring events were taking place. Specifically, it was just about the time when Mr. Dobson had begun to contemplate with satisfaction the prospect of a nice steak with onions and attendant fixin's in a good place he knew over in Monroe. Mr. Dobson knew a surprisingly large number of these good places, and he could be relied upon at any time to give the most intimate proofs of this acquaintanceship. It should be said that this repast was in the nature of a necessary preliminary for the more serious business of the evening ahead. Mr. Dobson believed with all his heart that any army does its best fighting on extended trouser-belts, and this philosophy he applied in a liberal way to individuals, particularly himself. Mr. Dobson was a man of peace, distinctly so; but he had been trained by experience to take few chances in this important matter of preparation for the unexpected emergency.

As a coincidence, it was almost exactly at this same time when a certain beetle-browed person who had been methodically pushing his square-shouldered way through the Main Street of Monroe beautiful, suddenly came to a halt, rubbed his eyes unbelievingly at a portrait

appearing on the front page of the paper thrust before him, and having examined with rapidly increasing indignation the article accompanying the picture, observed in loud tones, "Well, boys, this settles it! I just can't stand it no more."

With this comment the well-digging representative of the Board of Education of Irish Hill — you've guessed, already — shoved this special extra of *The Item* into his pocket, spat vigorously into the palms of his calloused hands, and exclaimed in still louder tones to two attending gentlemen of equally sturdy and well-preserved appearance, "Come on, boys; let's go!"

The idea met with the enthusiastic approval on the part of the boys thus addressed. . . . There was the mud-spattered sedan at the curb. . . .

IV

It was none other than Mr. Short himself, politely bowing out an outraged Janitor Atkins from the recesses of his front parlor, and still carrying in his hand the napkin he had borne from the table when he was interrupted in the enjoyment of supper.

"I agree with you; it certainly looks like another piece of spite work by this fellow Hamilton. Of course, all he wants to do is to keep you away from the hearing. Most likely he's afraid you might put in a good word for Brother Tyrone."

"Yes, *sir*; that's just the way I figgered it. A pretty slim excuse, tellin' me that the kids in the Senior Show has got to practice tonight, in the grammar school, just because there ain't room for them in the high-school building on account of the big crowd that's sure to be on hand to see that Jack Tyrone gets a square deal; and so I got to give up a chanst to stand by him and go over to the grammar school instead, and about bust my back keepin' the furnaces a-goin' so them dear little lummocks won't ketch cold. An' he says they won't be there moren' a couple of hours at the outside; and if I had *my* way they'd be on the outside of the school and on the inside of a good jail for the rest o' their lives. I got a rattlin' good notion to tell him so, too. . . ."

"Never mind," comforted Mr. Short, his mind more on his supper, which he feared was growing cold, than on his visitor. "You'll have a chance to tell him a great deal more before very long, or I miss my guess. I want to compliment you, too, on mentioning this fresh evidence of Hamilton's lack of consideration for the faithful employees of the school; it has come just in time for me to include it in the testimony I shall give this evening on behalf of Brother Tyrone."

Mr. Atkins, although still groaning at the prospect of an evening's unexpected labor, perked up a trifle at these honeyed words, and with the added reassurance ringing in his ears that Mr. Short had every intention of sockin' it good an' plenty to the inconsiderate Hamilton, departed. Two blocks down the street he paused to gaze at a mud-spattered sedan which rushed past. "S a wonder the police don't put a stop to some o' these here speed kings who come a-scootin' along as if they owned the road." Ten minutes later, and halfway across the street, "Good land!" For once in his life Mr. Atkins made a wholly unrestrained, quick movement, a leap for safety and the sidewalk, as another car dodged past — a car bearing a gentleman of aldermanic proportions, who had put behind him all thoughts of steaks and onions in favor of an immediate call on the author of this attack upon his friend, Smith B. Hamilton; a gentleman whose fists beat a preliminary tattoo on the steering wheel as he urged forward his fast-flying chariot. For — you've guessed it again — Mr. William Dobson had selected as his point of convergence in Monroe the residence of the editor and proprietor of *The Item*, chosen immediately after his one quick look at the latest quip of the plain-spoken Mr. Short.

So passed, also, Mr. Atkins to the good and faithful performance of *his* duties — good and faithful, according to his own interpretation. . . .

Mr. Short gave an impatient flip to his napkin and rose again from his table as another strident peal came from the doorbell.

"Seems 's if every Tom, Dick, and Harry in Monroe's dropping in here tonight. It's a wonder they can't leave me alone; don't they know I have to go to that hearing?"

He pulled wide open the door. . . . "Oh, my gosh, my gosh! The boys from Irish Hill!"

He would have turned and fled to the comparative safety of the attic or cellar; he might even have tried hiding under the bed in the spare room, had an instant's time been given him. There wasn't. A burly arm shot forth; a calloused hand slammed the door shut, cutting off any hope of retreat. At the same moment with pained interest he observed two gigantic forms that promptly stepped between him and the haven he had so suddenly left; turning his head, with more pained interest he beheld a tremendous fist hovering squarely in front of him. This was not particularly difficult to see, even in the semi-darkness, since its owner was obligingly holding it about two inches from his nose.

Mr. Short waited for his callers to begin the conversation; and since he had every reason to expect it might concern himself, he courteously gave it his best attention. There was no delay.

"Well, boys, here it is!"

Even in his agitated state of mind, Mr. Short readily understood that the pronoun, although carelessly used, undoubtedly referred to him alone.

"Strike a match and let's look at it!" A suggestion in a hoarse voice from one of the gentlemen in the rear.

"What's the trouble?" feebly essayed Mr. Short in the most conciliatory of tones.

"Ain't no trouble," was the reply. "This is going to be a reg'lar cast-iron, copper-riveted, diamond-tipped pleasure!"

Mr. Short dismally reflected that some people have very peculiar ideas of pleasure, very different from his own; and that well-diggers, if this professionally spoken person was a specimen of the tribe, have unusually unpleasant ideas of pleasure. Any hope he may have entertained that he was not to be included in the evening's divertissement of the visitors from Irish Hill went glimmering at the word: he was already included. This sound line of editorial reasoning was further emphasized by one of the attendant delegates, who, after walking around Mr. Short and sizing him up, observed critically,

"Tain't much to look at, is it?"

"Nope, it ain't," was the terse comment of the gentleman who was conducting this program of unexpected pleasures.

"You was a-figgerin' on changin' his map," continued this critical inspector, "an', of course, it had ought to be done in the right way."

Map! That long-promised change in personal maps! Mr. Short opened his mouth to let out a howl of terror.

"Don't!" from the proprietor of the fist.

Mr. Short didn't.

"What stumps me," observed the gentleman who had made the survey, "is where we had ought to go to work. This strikes me as bein' quite a job, an', of course, all the boys from Irish Hill are dependin' on us to fix it up pretty near right."

"S too bad we ain't got Jake McCormick along," sighed the third member of the committee. "He's had a lot of good experience; d'ye remember what an elegant job he done on that city feller who sold his wife a lot of books fer a dollar down, an' old Jake ketched him before he got out of the front yard? Gosh, wasn't I *lucky* to be around!"

Lucky to be around; *lucky*? Mr. Short gave a convulsive shudder.

"Stop that 'ere wiggling!" from the chairman of the delegation.

Mr. Short was quick to comply, although this was no mean feat.

"Jake is pretty handy with these jobs," assented the chairman. "But I'd rather git Mike Sweeney's advice, if we could bother him to knock off long enough to look into this a little fer us. Why, he kept that lightnin' rod peddler a-settin' on the roof of his barn nearly two hours, all the while a-wavin' a shotgun at him, until one of the boys could fetch over that brindle bull-terrier from the flats." Pleasantly to Mr. Short, "It'd a done your heart good to see how that feller run when he slid off his perch and that bull pup took after him; nearly all the boys got there in time to see what a good chore old Mike was a-doin'. Mike could a' had the nomination fer *mayor* after that."

Mr. Short reflected that the office of county sheriff might have its own peculiar problems. What was the matter with the Governor; why didn't he send over a couple of companies of the militia to this terrible suburb of Monroe? If he ever got out of *this* scrape. . . .

This discussion, although conducted in the most dignified and parliamentary way possible, might have developed into a more heated argument, had there not been an unexpected interruption from the darkness of the yard, an interruption which resolved itself into the sudden eruption of a middle-aged stranger, who dashed up the steps and into this little gathering with all the grace of a runaway safe-deposit vault.

"Where's Short?" bellowed a mad-clear-through Bill Dobson — yes, you've guessed correctly again.

One of the trio bristled forward. "And what do *you* want? *You* ain't a-goin' to put no stop to these perceedings!"

"Want?" shouted Mr. Dobson. "Want? I'm going to make this fellow eat his infernal paper word by word if I have to push it down his throat; and I'd like to see you or the whole bunch of you keep me from it! Hurry up and tell me where he is!"

"Here *it* is," gently corrected the finder of waters, indicating Mr. Short with a wave of his fist.

Interrupted one of the others, "Hold on a minute, boys! It looks to me as if this 'ere gentleman has got an idea that's well worth lookin' into." Apologetically, "Of course, all we'd been a-figgerin' on was a-changin' his map; but *I* say that the boys back at Irish Hill wouldn't

put up no holler if they knew we'd tried out something else that sounds like a improvement. *They're* absolutely fairminded as anyone you'd ever want to see, just as long as they know the job's been done up right."

Maps! Irish Hill! Mr. Dobson, who had been capering around the porch, ceased his gyrations, and exclaimed,

"Well, I'll be everlastingly doggoned! Now I know who you are. Don't you recollect I was talking to you over at the garage?" And Mr. Dobson shook hands all the way around with the committee, gracefully accepting the explanation of the chairman that he'd have to be excused for using his left hand, since his right was busy in shepherding Mr. Short.

These pleasant introductions having been performed, with the added assurance from Mr. Dobson's chance acquaintance of some weeks back that this gentleman is all right, boys, an' it's a real help to have him here on deck — this latest addition to the line forming on the left turned to the fifth wheel and demanded,

"What new deviltry are *you* up to, tonight?"

Mr. Short, perceiving that he was addressed, replied as cautiously as possible under the circumstances,

"I was expecting to go to the hearing, but I have just changed my mind, and I'm going to stay home."

"And I suppose you were fixing to speak up for that Jackson R. Tyrone?" inquired the belligerent Mr. Dobson. "Probably, too, you're all primed up to throw some more mud on that decent young fellow, who's only asking to be left alone to make his schools amount to something?"

"Well, you see . . . you see I thought I had to go because they gave me a subpoena," stammered the editor.

"So, if you stay home you're out of luck, and if you go to the hearing you're out of luck, and no matter what you do. . . ."

Mr. Dobson never finished his sentence, for it was right then that he had one of those flashes of inspiration which had made his name one to be conjured with these many years. A brilliant scheme, entirely worthy to be set up along with his other masterpieces, burst upon him.

"Oh my, oh my!" chortled Mr. Dobson, finding it impossible for the moment to express his happiness in more tangible form. "See here, boys, I want to talk to you a second! G'wan inside if you want to, Short; I don't care what you do, only don't forget we *might* come back!" . . . He grinned as the relieved editor fled through the door; he laughed outright as he heard the bolts shot home. . . . "Oh my, oh my." . . . The perplexed committee followed the gentleman with brains down the steps and out to the mud-spattered sedan. . . . Two minutes later, in answer to a question from the frenzied Mr. Short, his wife having peered cautiously from behind a lowered shade, "You can come out from under that couch, now; they've driven off." . . .

Thirty minutes later at the telephone in the editor's parlor,

"What's the matter with you, Brother Short? Why aren't you here? This feller Hamilton's raisin' Cain at the hearin' and you got to get here *quick*!"

. . . Out of luck if I stay home; out of luck if I go to the school. . . . I'll have the law on them; lemme get at that telephone! . . . Wait a second; better not go off half-cocked; that new fellow said they *might* come back. Can't have *everybody* in Irish Hill sent to jail; the whole *town'd* come boiling over here if I said a word. I'm going to stay home. . . . Oh, my gosh, if I *don't* go to the hearing, what'll that fool Tibbs and the rest of the boys down at the firehouse do to me? I'll *have* to go, or I might as well sell out! . . . Oh, what a mess! . . .

As the visiting committee walked up the steps of the brilliantly lighted high-school building, and for the tenth time during the ride,

"I *told* you this gentleman has got brains. *Ain't* we lucky he showed up!"

"O. K.," voted the delegate with the husky voice.

Mr. Dobson, bearing these hearty encomiums with the same modesty as he had shown under similar conditions in the past, giggled again.

"*I'll* say this is going to be good!" . . . Without doubt Mr. Dobson was very much pleased about something.

And these four sturdy citizens strode into the crowded hall. The last four seats on the aisle were unoccupied and they sat down.

. . . And in another part of Monroe, the good and faithful Janitor Atkins was presumably "busting his back" to keep the grammar school warm enough, even for "them lummocks" practicing in the Senior Show. . . . The fact that he was unable to secure telephone reports from the battle-front over at the high-school building added to his personal woes. . . . "S a wonder they can't keep somebody in them offices; they might *know* a body'd like to find out how poor Jack Tyrone is makin' out." . . . (To Be Continued)

Pontiac Meets the Depression

Teachers' Wage Adjustment in Pontiac, Michigan, 1930-1936

James H. Harris, Superintendent of Schools

Like scores of other superintendents I have been beset during the past year or two with almost numberless requests for information about our teachers' salary schedule; whether it was still in operation or had gone by default; what wage reductions had been made during the depression; to what extent, if any, wages had been restored; what methods of procedure were used; and so forth and so on.

As a result, or by-product, of these inquiries it occurred to me that it might be of interest to write the complete story of one city's experience with teachers' salaries during the years 1930-1936, with the additional thought that such a record might possibly prove of value when the next depression, like prosperity, appears "around the corner."

Whether we have any depressions in the future or not, the story of what happened to the teachers of one city during a depression that unquestionably *was* a depression, may be worth the telling. This article is simply one small contribution to the records and reminiscences of a tragic period which those of us who passed through it are not likely soon to forget.

So—here is the story of Pontiac's tussle with the depression during the years 1930 to 1936!

In the years immediately preceding 1930, the teachers' salary schedule in Pontiac was as described below. It is the schedule which, in the main, we are gradually seeking to restore.

Elementary Teachers

Minimum, \$1,300; Maximum, \$2,000; attained by increments of \$100 and \$50 a year, over a period of 10 years.

Junior-High Teachers

Minimum, \$1,500; Maximum, \$2,400; attained by increments of \$100 a year over a period of nine years.

Senior-High Teachers

Minimum, \$1,800; Maximum—Men, \$3,000; Women, \$2,600; attained by increments of \$100 and \$50, over a period of twelve years. Teachers earning a master's degree while in service could advance to a maximum of \$100 in excess of the above maximums.

The Early Depression Years

For the year 1930-31, the scheduled increases, which had been in operation for a great many years, were eliminated, and the pay scale of 1929-30 was duplicated. This was the first step in the process of deflation, and Pontiac was among the first, if not the first, to recognize the trend of events and to anticipate the emergency. The total amount spent for teachers' salaries in this year was \$883,150.

Effective September, 1931, the reductions that were made were governed by the following resolution:

1. All teachers receiving \$1,600 and less were advanced \$100, as per the original schedule. Thus a teacher receiving \$1,500 was advanced to \$1,600; a teacher receiving \$1,350 was advanced to \$1,450; and so on.

2. Teachers receiving \$1,650 were advanced \$50 to \$1,700, at which point all increases stopped.

3. Teachers receiving salaries ranging from \$1,700 to \$1,900 both inclusive received neither an increase nor a decrease. Their salaries remained just where they were.

4. Teachers receiving salaries ranging from \$1,901 to \$1,999 were cut to an even \$1,900. Thus, a teacher receiving \$1,950 was reduced to \$1,900.

5. All teachers receiving \$2,000 and over were cut 5 per cent. The term "Teacher" included all those engaged in instructional service—principals, supervisors, special teachers, librarians, and so on. No one in the system receiving \$2,000 or higher, was exempt.

Later in the year in order to maintain a ten month's school term, the teachers volunteered their services for the last month, with the understanding that they were to receive any funds that later came in. Finally they received one

Editor's Note. Few superintendents have had the courage to record in a published article the story of the wage adjustments made in their communities. The present article is the record of a city in which the superintendent, the board of education, and the teachers meet the situation courageously with understanding of one another's difficulties, and with the determination to do the very best which circumstances permitted.

third of their June pay. This cut represented 7½ per cent. The total amount expended for teachers' salaries this year was \$843,042.50.

The School Year 1932-1933

Effective September, 1932, the following sliding scale reduction was made for the year 1932-1933:

\$1,000-1,099.....	nothing
\$1,100-1,199.....	4 per cent
\$1,200-1,299.....	6 per cent
\$1,300-1,499.....	10 per cent
\$1,500-1,699.....	12½ per cent
\$1,700-1,999.....	15 per cent
\$2,000-2,999.....	16 2/3 per cent
\$3,000-4,299.....	18 per cent
\$4,300-Up.....	20 per cent

Under date of December 1, 1932, the board of education made the following deductions for December, 1932:

Less than \$120.....	0 per cent
\$120 to \$139, inclusive.....	5 per cent
\$140 to \$179, inclusive.....	6 per cent
\$180 to \$249, inclusive.....	7 per cent
\$250 and Up.....	8 per cent

For the month of February, 1933, a flat 10 per cent cut was made on the December wage scale. In May, 1933, the board of education, in order to complete even a nine-month school year, issued tax notes, or scrip, to the amount of \$120,000, predicated upon the delinquent taxes of 1930 and 1931.

The board also, through the generosity of the General Motors Corporation, obtained an advanced payment of \$50,000 on taxes due in July. By means of these two things, the scrip issue and the advance tax payment by General Motors, the schools were kept open for nine months.

In this year the schools struck bottom. The February reduction brought teachers' salaries to the lowest point in the entire period of depression. The total amount spent for teachers' salaries in the year 1932-33 was \$489,617.31—a drop from 1930-31 of approximately 45 per cent. The average salary of elementary teachers dropped from \$1,916.82 to \$1,156.38. We shall not soon forget the trying, almost tragic conditions of those days.

Improvement in 1933-34

The school year 1933-34 was also a nine-month year. In accordance with resolutions of the board of education as of August 17, and September 28, 1933, the rate of pay as fixed in February was continued, and remained on that basis throughout the year. At first it was feared that not even a nine-month school year was possible, but by resolution of March 22, 1934, the board finally committed itself to maintaining the schools for nine months. To carry out this resolution it was necessary to borrow \$20,000. The total amount spent for teachers' salaries this year, covering principals, supervisors, regular and substitute teachers, was \$483,853.42.

Further Betterment in 1934-35

For 1934-35, due to state aid under the Michigan Primary Supplement Fund, the board

of education was able to give the teachers a 10 per cent increase in salary and provide for a 9½-month school year. This restored wages to the level of December, 1932, plus a two-weeks lengthening of the school year. The scrip issue of May, 1933, was fully retired in the spring of 1935.

Toward the end of the year it was necessary to borrow \$45,000 to complete the year's work.

The total amount spent this year for teachers' salaries, including principals, supervisors, regular teachers and substitute teachers, was \$581,349.53.

The Years 1935-36 and 1936-37

In May, 1935, when the matter of salaries for the ensuing school year was before the board of education for consideration, the superintendent of schools suggested that a group of teachers, of their own choosing, should be invited to appear before the board of education and explain their views as to salaries. At the same time, the board would have an opportunity to explain to the teachers the problems and difficulties that confronted it. The result, while a compromise, was satisfactory to all parties.

In a seven-point program covering the year 1935-36 presented by the superintendent of schools, there were three items that directly affected the welfare of the schools and the teachers. These were (1) that the board of education should definitely commit itself to a 9½ months' school year; (2) that the teachers should each receive a flat \$15 per month increase in salary; (3) that the annual salary contract should be restored. These items were all adopted by the board.

The total amount spent for teachers' salaries this year, covering the same groups as in previous years, was \$644,707.99.

For the year 1936-37, the school year has been restored to its predepression length of 10 months, and the teachers are granted a flat \$10 per month increase. The total increase in teachers' salaries will approximate \$78,000.

Specific Illustrations of Salary Variations

	Individual Illustrations of Salary Variations		
	1930-31	1932-33	1935-36
	9 Months	9½ Months	10 Months
	—Low Point		
Mr. H— (Junior-High Principal)	\$3,750.00	\$2,177.01	\$2,669.50
Miss S— (Elementary Principal)	2,800.00	1,669.86	2,090.00
Miss W— (High-School Teacher)	2,500.00	1,490.94	1,881.00
Mr. L— (High-School Teacher)	3,000.00	1,789.20	2,223.00
Miss M— (Junior-High Teacher)	2,050.00	1,260.36	1,605.50
Mr. G— (Junior-High Teacher)	2,200.00	1,326.50	1,681.50
Miss K— (Elementary Teacher)	1,750.00	1,132.65	1,463.00
Miss M— (Elementary Teacher)	1,500.00	1,065.96	1,358.50

It will be noted from the above tabulation that those in the high salary brackets in 1930-31 are still, in 1936, a considerable distance from the earlier level, while those in the lower brackets in 1930-31 are now either close to their level of that year or have even gone a little beyond it. This is explained by the fact that the wage reductions in 1932 were based on a sliding scale, while the return advances have been made on a flat rate. This is not a

(Concluded on Page 86)

Long Beach Builds a New School Plant

by Will French, Superintendent of
Schools, Long Beach, California

It is probably safe to say that never in this country has a city the size of Long Beach completely rebuilt its entire school plant at one time. A few industrial cities of some size have sprung up overnight with a complete new plant at their disposal. These instances, however, represent the original planning and erection of a plant and do not represent a complete rebuilding of the schoolhouses at one time after structures had been built by the usual slow processes.

The 1933 earthquake in Long Beach made it necessary for this city of 150,000 population to do what no other city in this country ever was called upon to do in the way of completely re-providing itself with new school facilities. That Long Beach was not slow in making up its mind to undertake this stupendous task is shown by the fact that, of all the cities in Southern California more or less affected by this earthquake, the Long Beach school district has most completely rehoused its school children in earthquake-safe structures. Other cities are in one stage or another of the process of strengthening or rebuilding buildings, but no other city has put through a complete program of rehousing all its schools.

FIGURE II. ONE OF THE UNITS OF THE WOODROW WILSON HIGH SCHOOL PLANT
Exteriorly this gives the impression of being one building. Structurally there are three buildings to permit independent movement of the different sections in case of a quake.

Quakes Demand More Quake-Resistive School Buildings

The widespread occurrence in recent months of more or less severe earthquakes, which have affected different parts of the United States from Montana to New York state, makes a general nontechnical account of what Long Beach has done and some of the outstanding features of its construction program of interest to lay readers. The technical account with appropriate engineering details remains to be prepared for the architectural press by the architects and engineers who are technically qualified to perform this task as the present writer is not. This article claims to be no more than a general statement of the construction program.

It is to be noticed that wherever quakes of any intensity strike, great damage usually results to school buildings. This is quite likely to lead to the inference that these buildings are poorly constructed. As a matter of fact, they are probably better built in most cities than are other types of structures, but the type of buildings demanded for school use, having great length in proportion to their width and being strengthened with relatively few cross walls,

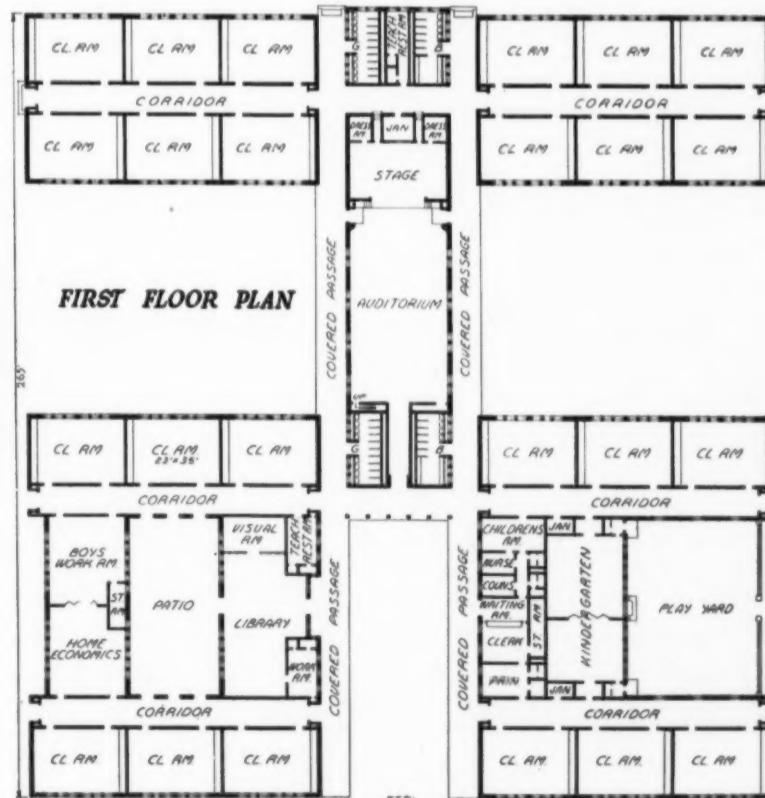
makes them peculiarly susceptible to damage by earthquakes. Moreover, brick has been a favored type of material for schoolhousings exterior walls, and of all materials it probably ranks as one of the least satisfactory so far as quake-resistance is concerned.

The earthquake history for school buildings, coupled with the natural desire which every community has to promote the safety of its children, will cause a good many architects, superintendents, and boards of education to give earthquake resistance more thought in the future than has been the case in the past. The experience of Long Beach may, therefore, be of value to widely scattered communities throughout the country.

In rebuilding its plant, Long Beach has instructed its architects and engineers to do everything in their power to make sure that the new school plant shall be as fully quake-resistive as they know how to make it. All of this construction has also been subjected to inspection of and approval by the California State Division of Architecture under the Field Act passed by the legislature in 1933. The State Division of Architecture has complete authority to refuse



FIGURE I (Above) UNITS OF THE JANE ADDAMS SCHOOL, LONG BEACH, CALIFORNIA



(Right) FLOOR PLAN, JANE ADDAMS SCHOOL, LONG BEACH, CALIFORNIA
Edwall James Baume, Architect, Long Beach, California.



FIGURE III. THE SCIENCE AND COMMERCIAL UNITS OF THE POLYTECHNIC HIGH SCHOOL PLANT, LONG BEACH, CALIFORNIA
All units of this plant are of steel frame construction.

to permit the construction of a public-school building unless it will be, in their judgment, structurally adequate for earthquake conditions.

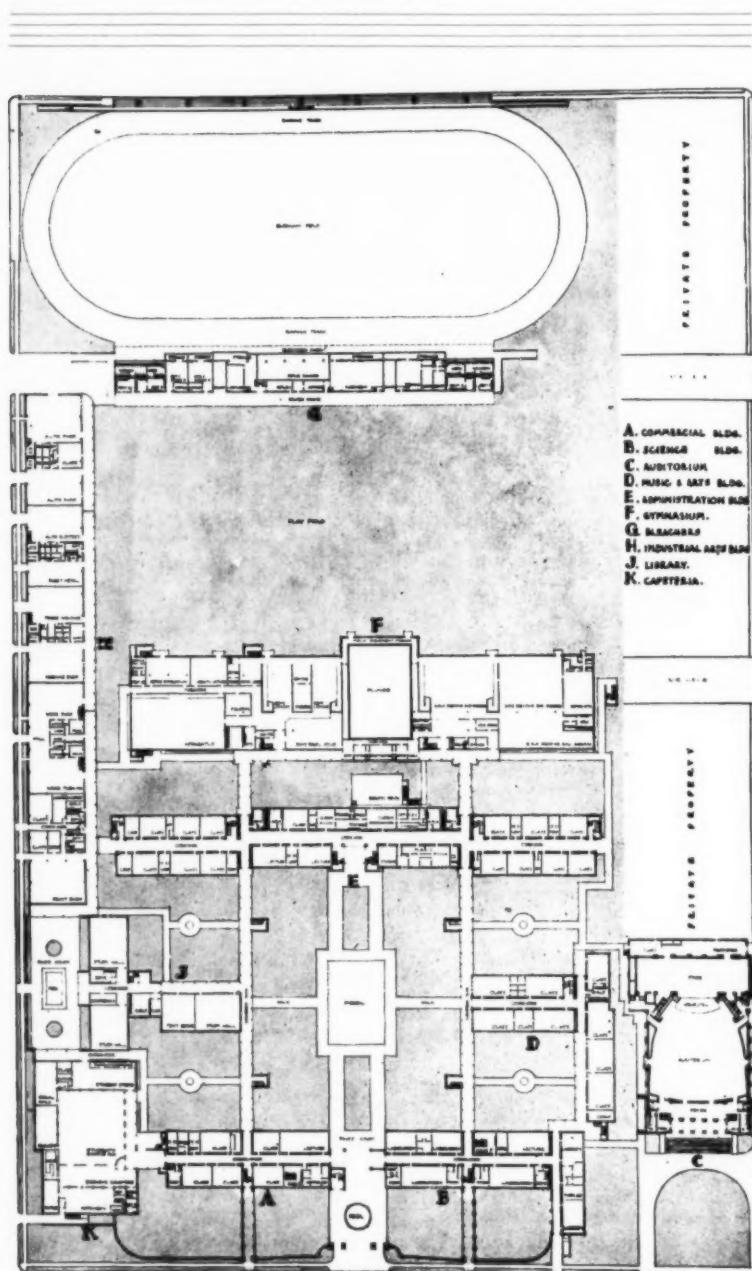
The Long Beach building operations have been financed by a bond issue, current tax receipts, and federal money. The work of demolition of the old school plant was almost en-

tirely done by men working on federal payrolls under one or another administrative setup. Much material was salvaged from the old plant. All of this was reconditioned by such labor, and the local district paid only for supervision, etc. The amounts saved by such a practice were indicated by the substantial differences between

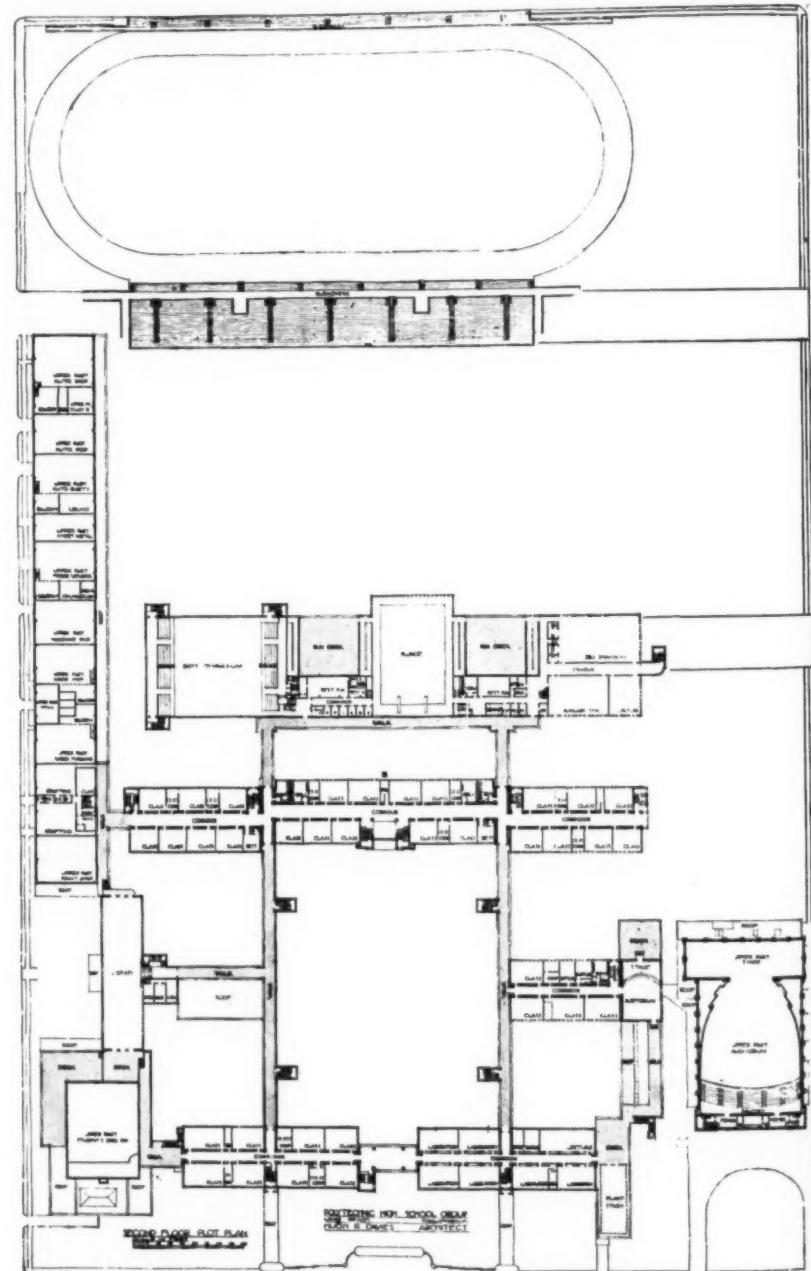
the bid on each unit "using salvage" and the one using "all new materials."

Character of Soil and Foundations Doubly Important

Planning for a quake-resistive building of this kind requires, first, a careful checking of



FIRST FLOOR PLOT PLAN. POLYTECHNIC HIGH SCHOOL,
LONG BEACH, CALIFORNIA
Hugh R. Davies, Architect, Long Beach, California.



SECOND FLOOR PLOT PLAN. POLYTECHNIC HIGH SCHOOL,
LONG BEACH, CALIFORNIA
Hugh R. Davies, Architect, Long Beach, California.

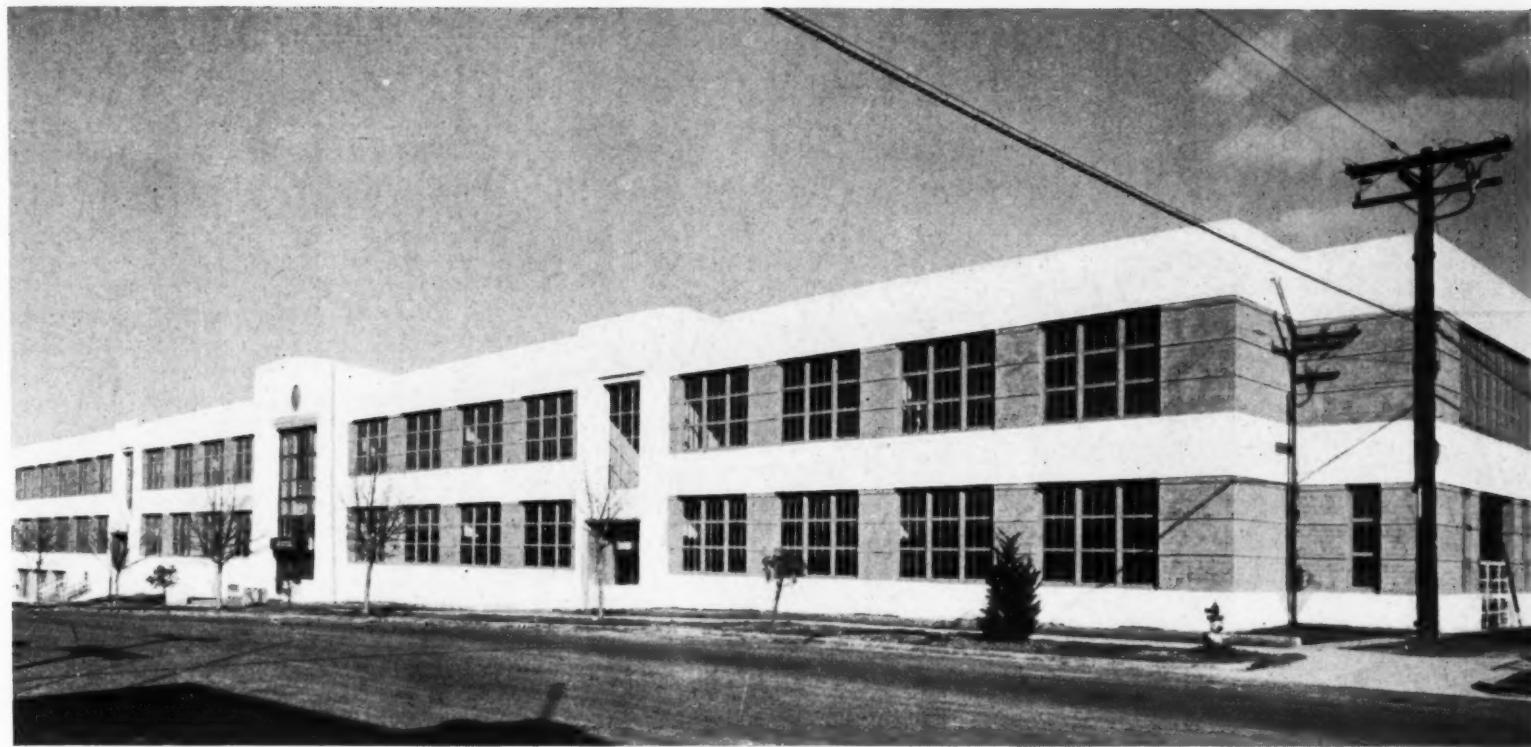
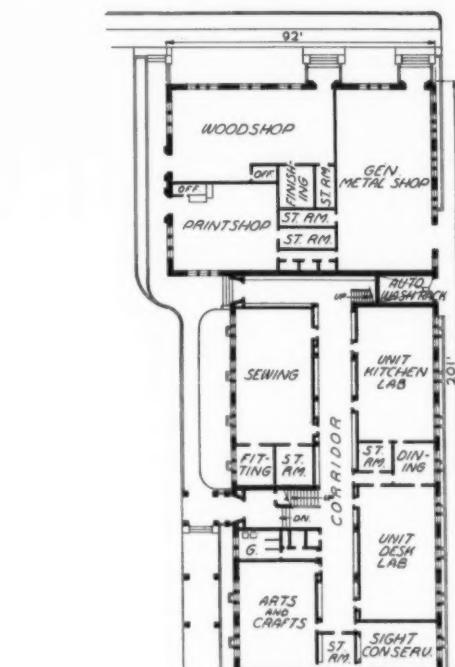
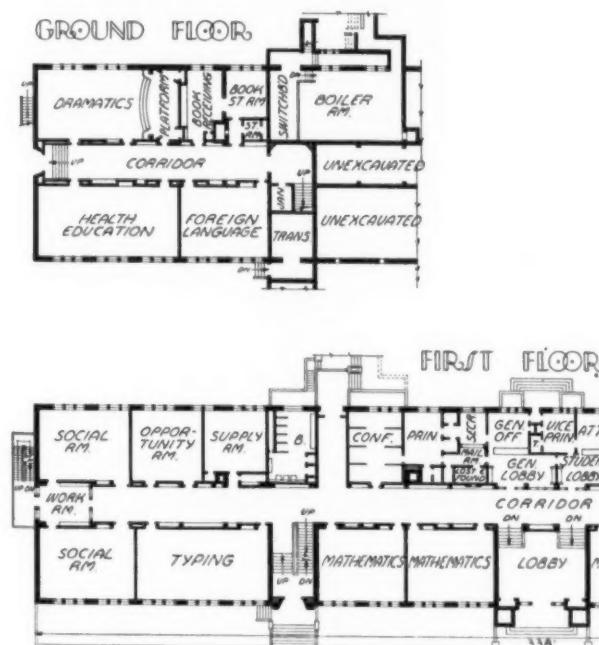


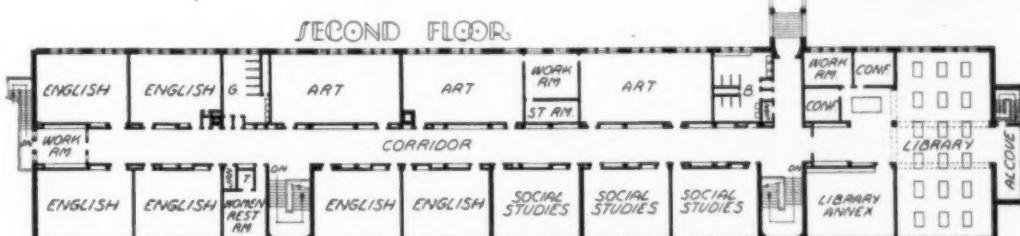
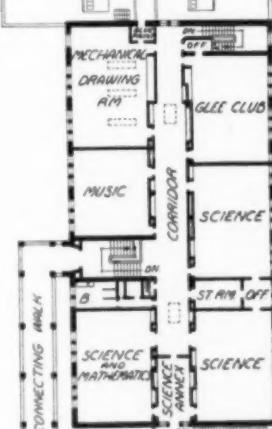
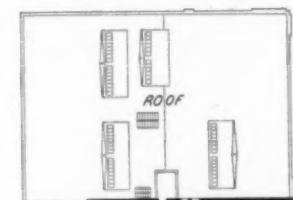
FIGURE IV. WASHINGTON JUNIOR HIGH SCHOOL, LONG BEACH, CALIFORNIA
While the building appears to be one huge structure, it is, as a matter of fact, five separate units joined by special walls.

the soil of the proposed building site. Elaborate survey service has been utilized in Long Beach to determine the bearing value of the soil. A service organization equipped to make such soil experiments can give a rating from zero up to 100 per cent on a proposed site and reflect rather accurately to what extent the earth will carry part of the quake shock or pass it all on to the building itself. This city has abandoned some building sites in favor of others entirely on the analysis of the site as furnished by a



For two-story buildings, it has used steel-reinforced concrete and steel-frame buildings.

For one-story structures, it has used wood frame reinforced with steel. Wood construction, when proper construction methods are used to reduce fire hazard, has some advantages for use in earthquake zones over other types of construction because, other things being equal, a wooden frame building will stand a "shake" better than any other kind. With proper bracings and some steel reinforcing, it probably represents for the money, at usual construction prices, about as good a buy as any. Other things make it desirable, however, to use it only in one-story construction and this, of course, means excessively large school sites in proportion to the pupil population of the school. Most of the one-story plants illustrated in the accompanying pictures, both in the elementary schools



SECOND FLOOR PLAN, WASHINGTON JUNIOR HIGH SCHOOL, LONG BEACH, CALIFORNIA
W. Horace Austin, Architect, Long Beach, California.

company providing this service in this part of the state.

The matter of the foundation, of course, is of utmost importance because any type of building construction on a bad foundation will show terrific damage as compared to the same type on a good foundation. Outside, however, of increasing the size of footings, of steel, and of the thickness of walls out of all proportion to the size of load to be carried, nothing new is involved in the foundation planning.

Three Types of Construction in Long Beach Buildings

On top of these extra-heavy foundations, Long Beach has erected three principal types of buildings.

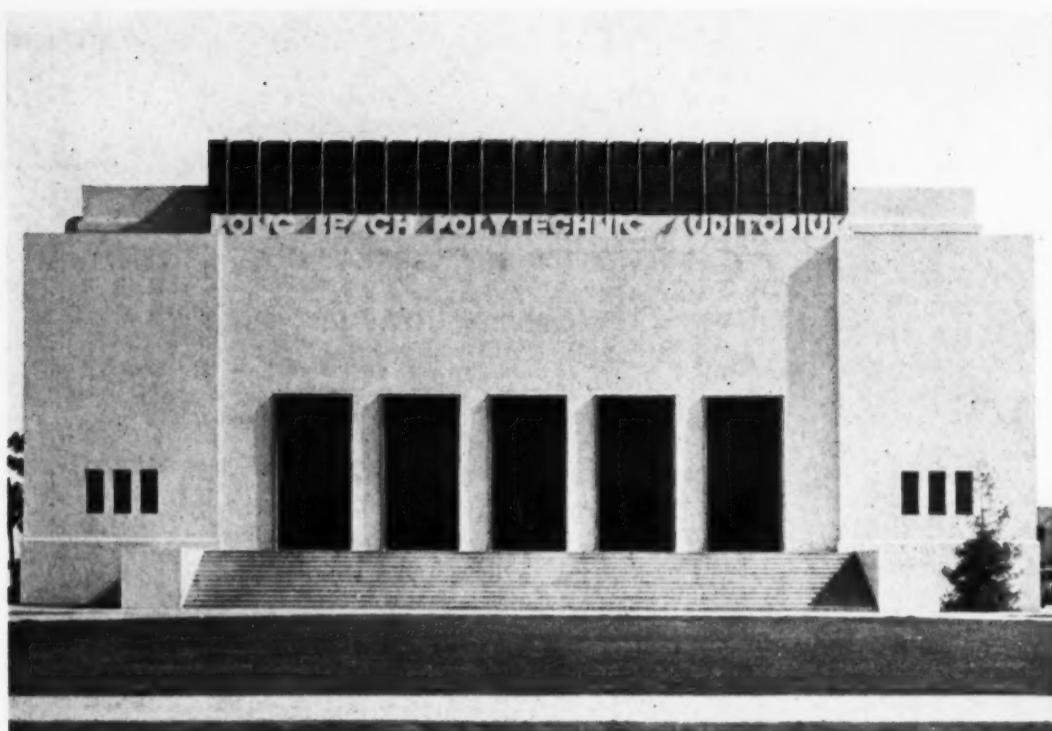


FIGURE V. FRONT ELEVATION OF THE AUDITORIUM UNIT, POLYTECHNIC HIGH SCHOOL, LONG BEACH, CALIFORNIA

and at the junior college, represent wooden frame construction tied together with steel in the ceilings, in some of the cross walls, and in the corridors. Steel angle irons are used in diagonals across the ceilings, and there are steel corner plates at the junction of the ceiling with the outside wall. These steel plates run entirely around the inside of the outside walls of the building. The wooden frame building is acceptable, of course, for only one-story buildings and where the units are not too large.

One of the things learned from experience, however, is that irrespective of the kind of construction used, it is a good thing not to make the units too large, or if large to put "joints" in them. At the junior college, where a new 30-acre site was available, all buildings are of the one-story kind, and no one unit is carried to any great length. Small elementary schools can be built in one unit. Larger elementary schools, where the size of the site would permit, can be one-story wooden frame construction in several units. This fact is illustrated in Figure I, which shows two units of the Jane Addams School.

A good idea of the use of steel in construction of two-story buildings can be gained by reference to Figure VII which shows the beginning of the steel-frame elementary-school building. This frame is mounted on an extra-heavy reinforced-concrete foundation and bolted thereto as can be seen from the picture. The steel represents heavier construction than might be

expected in a two-story building of this type, and the illustration shows the diagonal bracings both in the transverse walls and in the ceilings. The Polytechnic High School building illustrated in Figure III is a steel-frame building but of a different type of construction, with the weight carried in it by the center steel members enclosing the corridors. This is a new type of construction which Mr. Hugh Davies, the architect, expects to describe in detail when the approaches and other details of the buildings have been installed so the buildings of this plant can show in pictures to better advantage.

Units of Buildings Separated by "Bumpers"

It will be noted that the units of the Polytechnic High School building shown in this picture are separated from each other by a passageway. This is to prevent extra long buildings which under quake strain will pinch at some point and cause severe damage. These passageways between the units appear to the uninitiated as if they were integral parts of the structure. As a matter of fact, they are small individual structures setting in between the buildings and connected with the buildings proper on either side, if at all, only by surface structures.

In the building of the Woodrow Wilson High School group, shown in Figure II, we have a unit which appears to go around two sides of

an enclosed patio. This would involve two long axes in this construction, and quake experience has shown that one axis or the other of the building of this kind will get all the punishment. This building, however, is an example of getting the appearance of a large building from what actually is a three-unit building. Down the corridors, running each way from the center entrance, one observes an iron plate across the corridor floor. This marks the point at which there is a complete separation in the structure on each side of this plate, making it possible for one section of the building to ride up or down or sideways without carrying the other section with it. Externally, the surface is carried over the connection and might, of course, be damaged by a quake, but this would be superficial damage and would leave the structure of the building sound. These three sections of this building thus operate something like three pullman cars with the vestibules allowing for play at the end of each unit.

In the Washington Junior High School, shown in Figure IV, this same principle is applied to a building built of reinforced concrete,



FIGURE VI. BUNGALOWS ARE USED TO SUPPLEMENT THE PERMANENT BUILDINGS AND ARE SO DESIGNED AND NATURALLY FINISHED THAT THEY ARE NEVER "EYESORES"

all the structural walls in this building being of this material. The finish is such as is shown in the picture as to give the appearance of two kinds of material in the exterior walls. This effect is secured by coloring matter applied in the concrete for the darker portions. The chief adaptations in this type of construction to quake conditions grow out of an increase in the amount of steel used, in its placement, in the thickness of walls, and the size of columns.

During the process of rebuilding this plant, Long Beach school children have experienced every type of housing from park benches in the open, through tent bungalows to typical old barnlike bungalows and finally to the kind illustrated in Figure VI which represents the present point in the evolution of semipermanent housing in Long Beach. This particular illustration is of a group of bungalows used for classrooms and offices at the Junior College in conjunction with the permanent plant, some units of which are also pictured. This type of bungalow painted white and with green shutters and trim is being used where the permanent units have not all been completed.

The business office of the Long Beach city schools has developed this design for these bungalows and is having them built at a very reasonable figure. They meet the requirements of the State Division of Architecture in every way, and, in a community which can count upon mild and pleasant weather ninety-nine days out of a hundred, such housing provides a most satisfactory classroom at approximately less than 20 per cent of the cost of equivalent space in permanent housing. Bungalows, as illustrated, when given a little foundation planting, in a mild climate cannot be charged with the usual shortcomings credited to bungalows.

Thus, in an interval of three school years, (Concluded on Page 86)

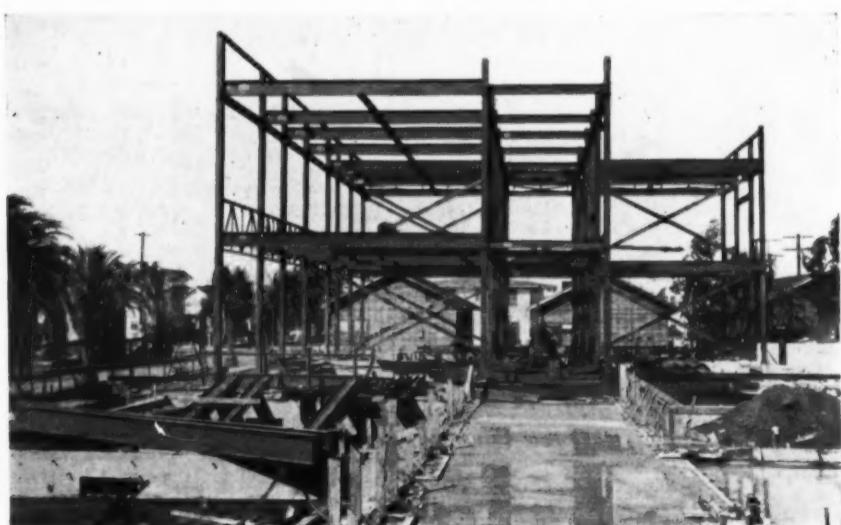
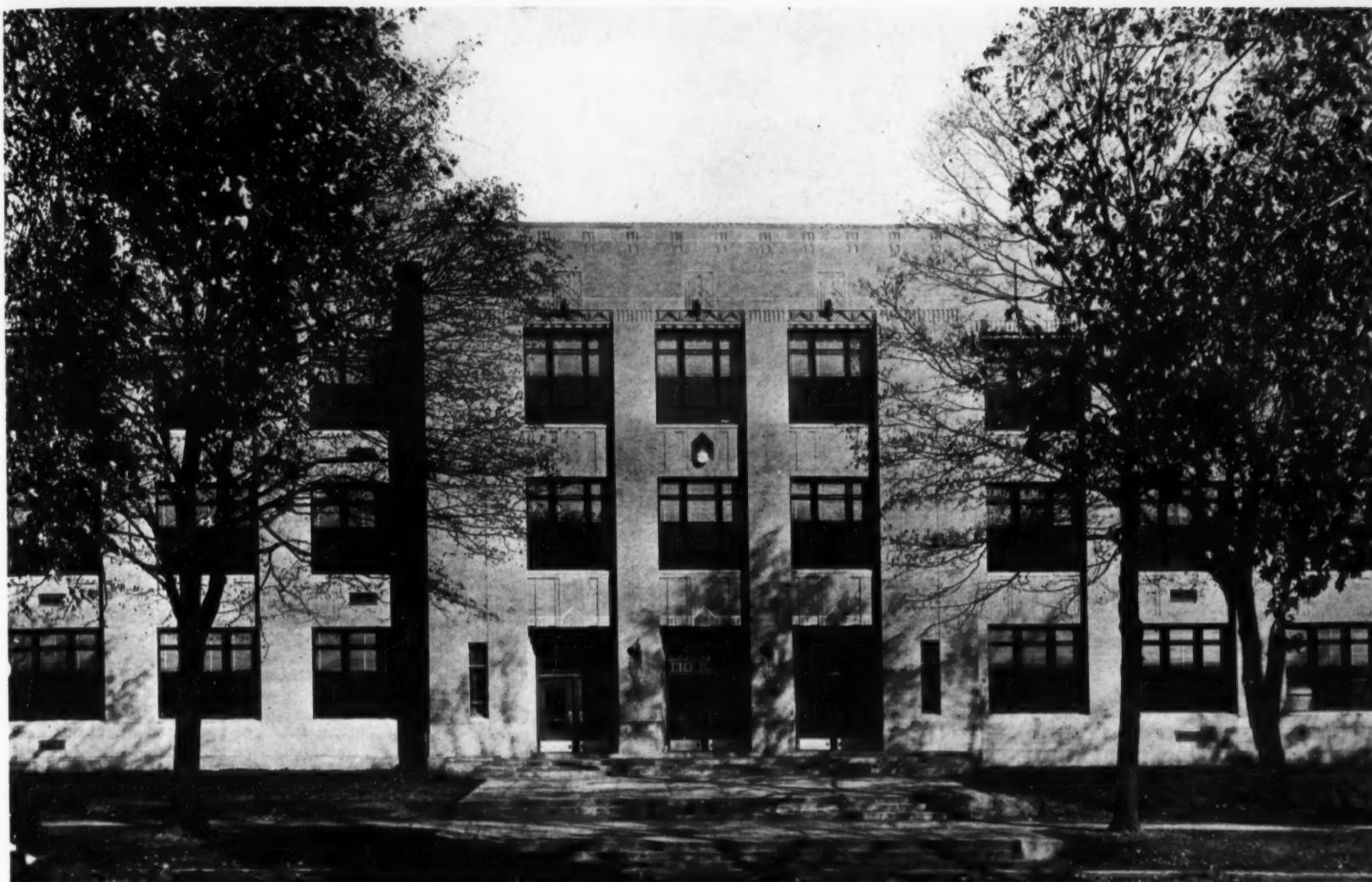


FIGURE VII. PARTIALLY ERECTED STEEL FRAME WORK FOR A TWO-STORY SCHOOL BUILDING
The diagonal bracing in the walls and ceilings can be clearly seen.



FRONT ENTRANCE, JUNIOR HIGH SCHOOL, CHAMPAIGN, ILLINOIS
George E. Ramey & Company, Berger and Kelley, Associated Architects, Champaign, Illinois.

Achieving *Adaptability* and *Flexibility* in a Junior High School Plant

By V. L. Nickell¹

The Champaign Junior High School is an important link in the chain of the building program which was formulated by the board of education of the city of Champaign in 1930. This program was the result of a survey of the local community and touched upon such vital matters as the population trends and the school population increase, together with a critical study of the school organization, growth of enrollment, and the school district's ability to pay. As a result of the study, it was confirmed that (1) the elementary schools were congested; (2) the senior high school was seriously overcrowded; (3) the population trend was in a definite direction upward over a period of years; (4) the city desired a change in the school organization; and (5) the school district possessed a limited ability to pay for a building program.

The first step in realizing the program was the erection of additions to certain elementary schools where the youngsters were being quartered in basement rooms and corridors. The second step was the remodeling of older buildings. The third step was the erection of a new shop unit and field house for the senior high school. The fourth step was the erection of the junior high school and is of immediate interest in this article.

When the need for a school building has been determined and the approval of the community secured, the next step is the planning of the building itself. In fact, this is the most important step in the process of erecting a new school plant. It requires the thought and work of two groups who must be brought together—the school officials and the architects. Each of these has a distinct and definite function.

¹Superintendent of schools, Champaign, Ill.

Briefly, it is the function of the school officials to provide a rather complete statement of the instructional needs which the new building is to serve; to outline the number, probable size, and location of departments and instructional areas; to indicate the size and organization of the classes and larger instructional groups; to plan the administrative setup and the consequent needs for office areas, pupil circulation, etc.; to indicate special requirements of equipment, machinery, and built-in utilities, arising out of the instructional program and the special purposes of each department and subject. Apart from these purely educational details, the school officials must provide facts concerning the possible outlay, the property, and the legal official conditions. The school officials may expect the architects to translate their educational factors, the function of the architects and the completeness and correctness of these data.

In terms of the needs laid down by the educational factors, the function of the architects and engineers is to lay out the detailed plans of the structure to be, to design elevations and interiors, to select materials and methods of construction and to write specifications, to assist in letting the contracts, to see that the structure is durably built, to plan the mechanical equipment with ample factors of safety, to see that the various contractors carry out the plans and specifications, to approve all building bills, and to adjust cases of disagreement between contractors and school officials.

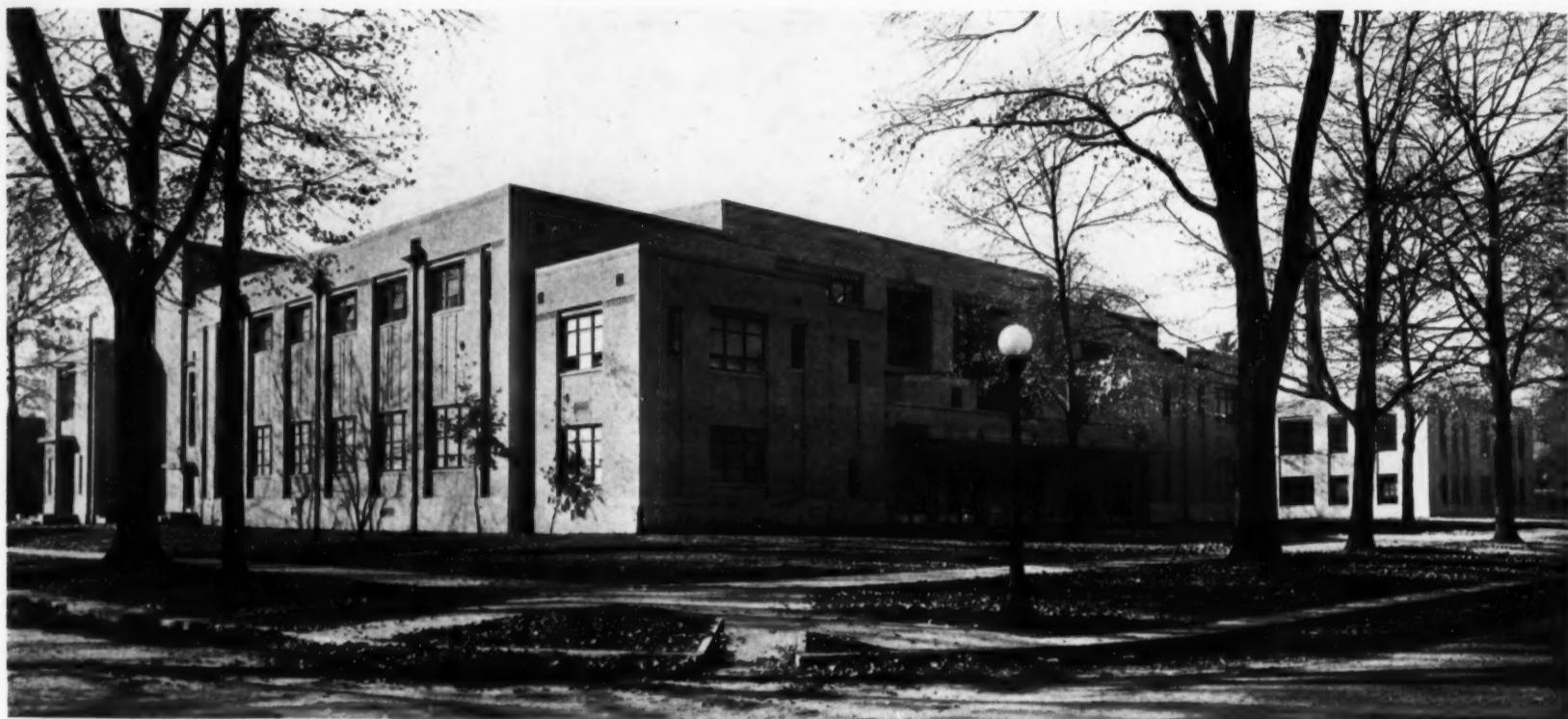
The architects know only in a general way what functions the building is to serve. The school officials know the specific uses for which the building must be designed. It is necessary for these two

groups to confer constantly on the preliminary sketches and plans, and later on the specifications, so that the completed whole will embody all of the necessary qualities that a good school building should possess from the standpoint of durability, and beauty; and further that it will contain the necessary features and arrangements to serve the educational purposes efficiently and economically for which it is designed.

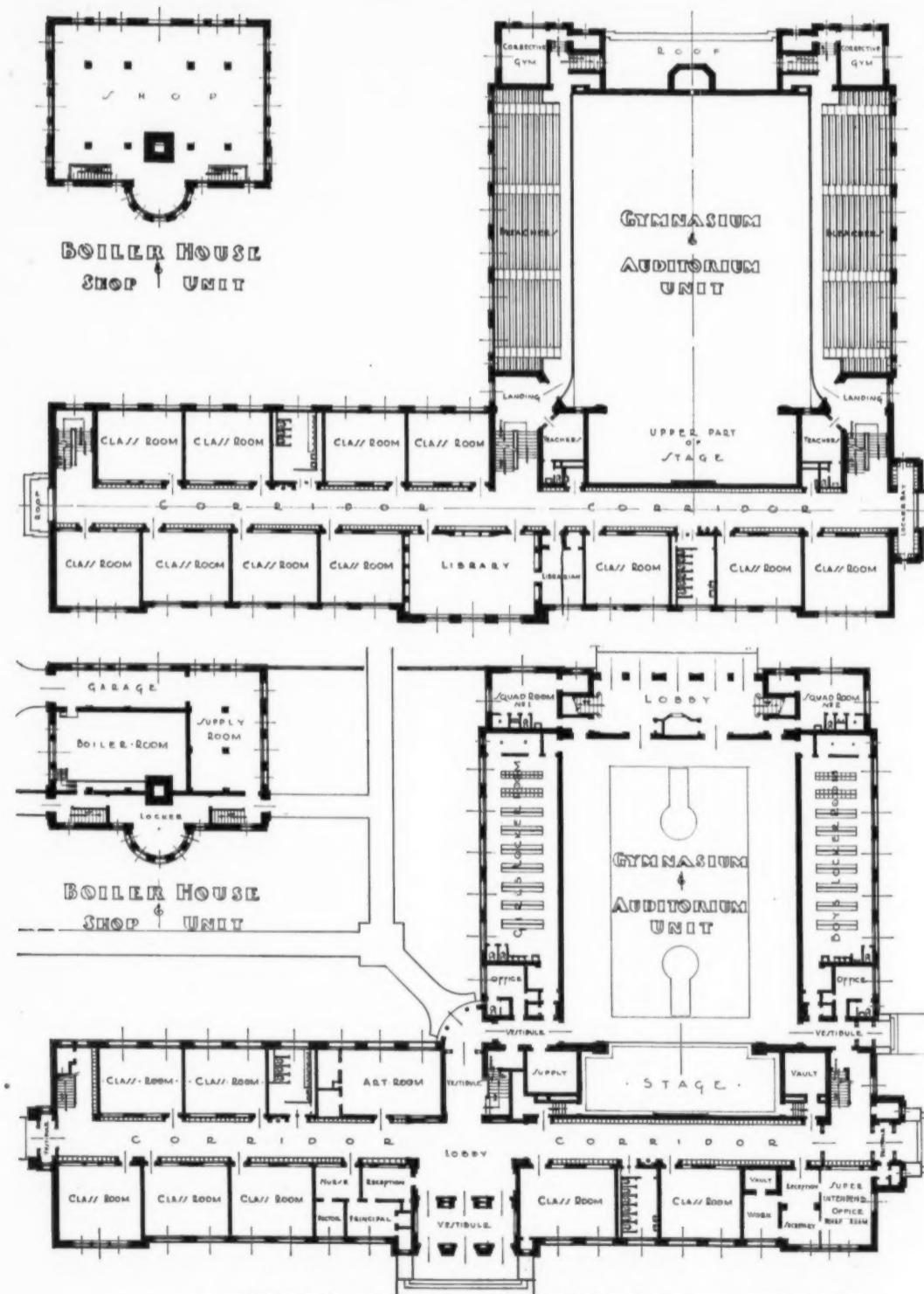
It is in harmonizing the details of this co-operative undertaking for the educational purposes that the greatest opportunity for success lies. The groups concerned in the planning of the Champaign Junior High School worked excellently together. The architects, George E. Ramey & Company, Berger & Kelley, associated architects, welcomed and embodied the counsel and advice of the school officials in working out the plans for this building. With members of the board of education and the superintendent of schools, the architects visited numerous school buildings in the states of Illinois, Indiana, New York, and Delaware. In these visits, efforts were made to discover not only what is desirable in the way of special features to be incorporated but also what undesirable features should certainly be avoided. In addition to this travel, the group had a conference with Dr. N. L. Engelhardt, in New York City, to receive his criticisms and suggestions on the tentative plans and arrangements. It was the desire of the group to leave no stone unturned in developing a building as well adapted as possible to serve the educational program of the city.

The Building

The building is a Class A structure and is arranged in three separate parts—an administrative



AUDITORIUM-GYMNASIUM ENTRANCE, JUNIOR HIGH SCHOOL, CHAMPAIGN, ILLINOIS

George E. Ramey & Company, Berger and Kelley, Associated Architects, Champaign, Illinois.
FIRST FLOOR PLAN, JUNIOR HIGH SCHOOL, CHAMPAIGN, ILLINOIS

and academic unit, a physical-education unit, and a shop and boiler house unit.

The academic unit has a very compact arrangement; 66 per cent of its floor space is given over to instruction purposes; only 34 per cent is utilized for circulation, storage closets, janitorial service centers, and walls and partitions. The unit is without a basement, except for an area 36 by 116 feet beneath the stage and the east entrance, which is divided into a transformer room and a storage room.

On the first floor there are seven classrooms; an administrative unit for the principal, the nurse, and the school physician; a general administrative suite for the school board, the superintendent, and the secretary. On the second floor there are eleven classrooms, a large library, and various service rooms. On the third floor there are general-science and food laboratories, a sewing room, a music room, and additional classrooms.

In the academic unit there are three main stairways; corridors are 12 feet wide, with classrooms on each side receiving their light from the north or the south. The stairways are so situated that no classroom is more than 65 feet from a stair. Care has been taken so that the traffic is served in such a way that the entire building can be cleared of pupils in a very short time should an emergency ever require it. Each stair is adequately lighted with natural light. The main vestibule has a terrazzo floor and the corridors have battleship-linoleum floors. Pupil lockers are built-in on each side of the corridors. These lockers are trimmed with chromium strips. Each locker is equipped with a built-in combination, master-keyed locker.

The entire academic unit is planned and constructed in units 14 feet in length. The regular classrooms, 29 in number, are each 28 feet long, 22 feet wide, and have a ceiling height of 12 feet. The partitions separating the classrooms carry no part of the structural weight of the building and can be changed without much cost. If at any time the instructional program or the administrative organization requires changes in the size of rooms, any room may be lengthened by one half or cut in half. This plan has been considered desirable as a means of adapting the building to changing educational needs.

The classrooms have been planned in order to best meet the educational activities conducted in them. Each room is equipped with teachers' cabinets and small compartments to store the pupils' work in progress. Rooms used by the English department have built-in bookcases in addition to the cabinets; the mathematics rooms have all available wall area covered with natural slate blackboards; in other classrooms the front walls are supplied with slate blackboard, and the remaining wall space is treated with corkboard.

The fenestration of the classrooms is approximately 23 per cent of the floor space and each room has four outlets for artificial lighting,



ADMINISTRATIVE UNIT CHAMPAIGN HIGH SCHOOL, SHOWING ENTRANCE TO SCHOOL-BOARD OFFICE

equipped with 300-watt lamps, enclosed in especially designed school globes. The light circuits are so arranged that the two lights near the windows may be used independently of the remaining lights. The artificial lighting is rated at approximately 15 foot-candles, equally distributed over the room at the working level.

The pupil equipment purchased for these classrooms is a special type of armchair, with solid backs, and full desk areas, all mounted on pedestals, equipped with rubber shoes. In a number of rooms where group instruction will be necessary, chairs and tables for six pupils each make up the equipment. All of the furniture is finished to harmonize with the woodwork of the building. The general-science rooms are equipped with a demonstration table for the instructor and special tables and chairs for students.

Five rooms in the building are planned to be 22 by 42 feet in size. One of these serves as the library, which has adjoining it a unit 14 feet long, used as a workroom of the librarian and a storeroom for library materials and books. The arrangement is such that the librarian has a full view of the main room while she is at work in her office.

One of the long units is equipped as a sewing laboratory, and another serves as a foods laboratory. A fourth room has a ceiling acoustically treated and is used for music classes. A fifth room is especially equipped for art classes. In this last-mentioned room reversible blackboards, with cork-board on the back, have been installed. There are special drawing tables for the pupils and a large storeroom for supplies. The teacher in charge is director of all art instruction in the city schools.

The Auditorium-Gymnasium

Considerations of economy made it necessary to plan the physical-education unit to serve also as an auditorium. The clear playing floor measures 78 by 101 feet. For physical-education purposes, this area is divided into two equal parts by an 8-foot canvas partition that is readily put in place, or removed. The two physical-education rooms thus formed are in use throughout the school day, with the exception of the lunch period. Adjoining the play floor on either side is a balcony, starting 8 feet above the floor, each side having a seating capacity of approximately 1,000. Beneath this balcony are dressing rooms, one for the boys and one for the girls. Each dressing room is equipped with 600 lockers and ample toilet facilities. The lockers are especially ventilated into a tunnel system, which leads to outside exhausts and keeps the rooms in pleasant condition. Adjoining each dressing room there is a shower room, arranged with six shower heads, each fitted with a controlling valve. At the entrance of each dressing room there is an office for the instructor.

At the point where the physical-education unit joins the academic unit, there is a large, well-equipped stage. When the room is used for audito-

rium purposes, the floor is covered with a canvas and a thousand steel folding chairs are set up.

The Shop and Boiler Unit

The shop and boiler house does not join either of the other units. The arrangement gives the entire building a better fire rating and a reduced insurance premium. The unit houses on the ground floor, a large supply room, a garage, as well as the boilers and machinery.

On the second floor, the shop area has been divided into sheet-metal and electrical shops, two shop classrooms, and a cafeteria. The shop areas measure 34½ by 44 feet.

The shops in this setup form two units of a six-unit plan of shop instruction. The remaining four shops are located in the senior high school six blocks away. While this arrangement is not entirely desirable from the standpoint of pupil travel, it does permit a greater variety of shop opportunities for both the junior- and senior-high-school students and involves a considerable economy in that all of the shops may be utilized for each period of the school day.

The entire building is heated by a 133-horse-power, low-pressure steel boiler, equipped for oil fuel. During the first winter of its use, which was extremely severe, the heating plant gave adequate warmth for the three units.

The central location of the building has made it desirable to include in it the superintendent's office, and space for the board of education and the secretary. These rooms, with a large vault and a storeroom, are located on the first floor on the southeast corner of the academic unit. The arrangement is such that the rooms may be used independently of the balance of the building. The health center for the school system is on the front mezzanine floor of the gymnasium and the attendance office adjoins it.

Cost and Pupil Capacity

Pupil capacity of building.....	2,200
Number of pupil stations.....	1,575
Cost of building.....	\$423,088.72
Cost of equipment.....	36,638.62
Total cost.....	\$459,727.34
Cost per cubic foot.....	7.8 cents
Cost per pupil accommodated.....	\$423
Cubic feet in building.....	519,000
Cost per cubic foot.....	7.8 cents
Floor area academic unit.....	18,714 sq. ft.
Floor area gymnasium unit.....	6,340 sq. ft.
Floor area shop unit.....	4,093 sq. ft.

THE THIRD PUBLIC WORKS PROGRAM

Initial federal allotments for school projects have been made recently which mark the beginning of the third PWA program.

The funds now available under this program result from the recent action of Congress freeing accumulated assets of the Public Works Administration in the PWA revolving fund. Congress originally specified that up to \$300,000,000 of the PWA revolving fund, resulting from prior loans made by PWA which are being

recovered with interest and profit, should be used at the direction of the President for allotment grants for the same type of permanent improvement works undertaken in the first and second PWA programs.

The initial allotment grants totaled \$22,742,038 and the loans \$2,142,000, with the estimated total construction costs of \$50,774,196. The allotments for school projects included in these totals are as follows:

Grants (the outright gift of 45 per cent of the total cost), \$6,580,361.

Loans, \$827,000.

Total estimated construction costs, \$14,602,985.

School projects total 146 for over 200 individual school buildings. These include new elementary, grade and high, junior high and high schools, with many additions and alterations to existing buildings. The projects also include new gymnasiums, auditoriums, and cafeterias, in addition to new stadiums, field houses, and dormitories.

PWA AID TO NEW YORK SCHOOLS

Assistance by the PWA has added accommodations for 131,231 students in 3,180 classrooms in New York State public schools during the past three years, according to a report made by Arthur S. Tuttle, state PWA director to Federal Administrator Harold L. Ickes. More than 200 new school buildings have been built, and 24 additional schools have been renovated and improved with federal funds, according to the report.

The estimated value of the projects undertaken was \$79,000,000. Most of the loans and grants were made for new high-school and elementary-school buildings. New facilities were provided for 61,965 elementary-school pupils in 1,499 new classrooms, and for 53,729 more high-school students in 1,323 new high-school classrooms.

In addition, 15,537 students have been cared for in 358 new classrooms provided in combined elementary- and high-school buildings. Auditoriums, gymnasiums, cafeterias, libraries, and laboratories have also been provided.

ARE SCHOOL EMPLOYEES SUBJECT TO FEDERAL TAX?

An interesting tax case concerning employees of a school system was recently decided by the United States Circuit Court of Appeals for Texas. Mrs. Bena Hoskins, director of 48 school cafeterias of Fort Worth, made a Federal income-tax return in which she held that her salary of \$3,400 was exempt. The federal examiner denied the exemption and the U. S. Board of Tax Appeals affirmed his decision.

The case, however, was appealed to the United States Circuit Court of Appeals where the issue contained therein was broadly discussed by the three judges. The facts were not in dispute. The court, therefore, confined itself to former decisions in which "it is fundamental that neither a state nor the Federal Government may tax an instrumentality of the other, if it interferes with the governmental function of the other."

The court holds that a political division of the state (a school district) has the right to enforce rules and regulations that might be necessary to properly safeguard the health of pupils and teachers. Hence, the maintenance and operation of a school cafeteria is entirely in keeping with the authority of a board of education and consistent with the proper administration of the schools. Thus Mrs. Hoskins is a public employee engaged in performing a governmental function. The court upheld the exemption and reversed the board of tax appeals.

The Fort Worth board of education actively supported Mrs. Hoskins in her suit.

THE GLEN ALPINE HIGH SCHOOL, MORGANTON, NORTH CAROLINA

Adaptability of plan to meet the instructional needs, durability of materials, and economy in construction are the main objectives achieved in the planning and construction of the Glen Alpine High School in Burke County, North Carolina. In the short time that the building has been in use it has been found eminently satisfactory, and the rooms and departments, as well as the equipment has been found particularly well suited to the inclusive instructional program which the school provides for a rural community.

The building occupies a site measuring 188 by 132 feet. It comprises two stories, all above grade level, with the auditorium and administrative offices occupying the main front section.

The building is designed in the Jacobean style and is developed in brick and cast stone. The construction comprises brick bearing walls, wood joist partitions between classrooms, and bar-joist concrete floors. All the rooms as well as the corridors and stairs are finished with plaster walls



GENERAL EXTERIOR VIEW, HIGH SCHOOL, GLEN ALPINE, BURKE COUNTY, NORTH CAROLINA
Chas. C. Benton & Son, Architects, Wilson, North Carolina.

and ceilings. The windows throughout are the double-hung Truscon projected type, and the doors are wood, with nine lights and flush moldings. The roof is covered with asbestos shingles.

The building, which was planned in the spring of 1934, was completed during the early winter of 1934 and was occupied in January, 1935. The academic section of the building contains ten classrooms, a library, a study hall, and a combined cafeteria and playroom. The auditorium measures 80 by 52 feet and has seats for 812 persons.

The ground floor is entered from the lobby lead-

ing into the main hall. On this floor there are four classrooms, a cafeteria-playroom, and the auditorium. On the second floor there are four classrooms, clothing and food laboratories, a study hall, a library, and offices for the principal.

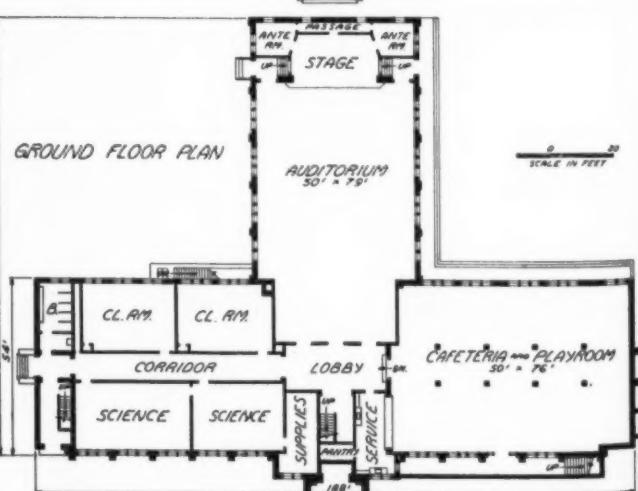
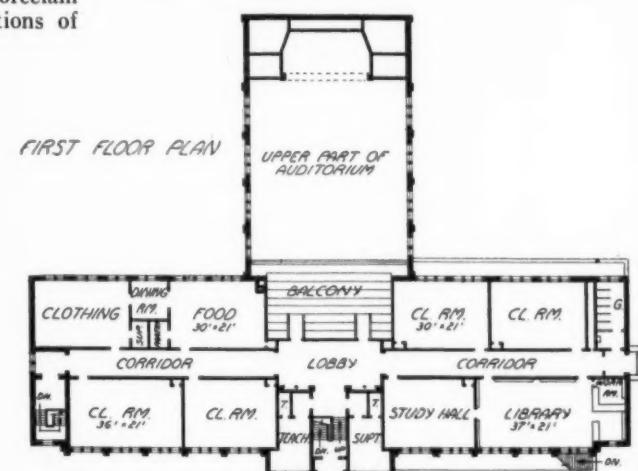
The heating system for the building consists of a one-pipe steam plant and Kewanee steel boiler. The electrical equipment includes a complete program-clock system and direct lighting. The sanitary equipment includes standard porcelain fixtures of school design and toilet partitions of metal.

The building was erected at a cost of \$38,965, and the equipment cost \$13,756, making the total cost \$52,721. The cost per cubic foot was 12 cents. The building has a normal pupil capacity of 480.

The educational planning of the building was supervised by Mr. R. L. Patton, county superintendent of schools, and the planning and engineering was done by Charles C. Benton & Son, architects, of Wilson, N. C.



DETAILS OF FRONT ENTRANCE, HIGH SCHOOL, GLEN ALPINE, BURKE COUNTY, NORTH CAROLINA



FLOOR PLANS, HIGH SCHOOL, GLEN ALPINE, BURKE COUNTY, NORTH CAROLINA
Chas. C. Benton & Son, Architects, Wilson, North Carolina.

Financial Economies of the Inglewood Grouping Policy

Lionel De Silva, Pb.D.¹

The problem of grouping children for instructional purposes and of providing teachers and classrooms for them is of practical importance to school administrators. The basis for grouping children is established by the policy of the school system, which policy at the same time determines the number of teachers required for a given school enrollment. It has, therefore, important financial implications, for it controls to a large extent the teachers' salaries, which are by far the largest part of the school budget.

For the purpose of effecting homogeneity in groups in order to accomplish the greatest economy and effectiveness of teaching, it is the common practice to group children according to grades or half grades. This method of grouping assumes that the child has progressed to a certain point, and is entitled to promotion; he may begin another year's growth when he has satisfactorily mastered the uniform standards of one grade.

The basis for the assignment of children to classes is necessarily rigid and lacking in flexibility. It has an important financial implication in that the number of pupils in a given grade is dependent upon the number of children who have satisfactorily mastered the requirements of the previous grade. This fact results in a large spread in the size of class within a given school or school system. In some school systems where the average class size is thirty pupils, the range in class membership extends from 15 to 45. It is the lower end of the range which is extremely costly, while the upper end provides problems in the reverberations which come from parents who feel—and probably justly so—that their children must pay in decreased educational returns for the large classes to which they are assigned.

To illustrate how costly the lower end of the range may become, data for the Inglewood city schools may be considered. In 1931-32 the average class size was 30 ADA. Since it is administratively impracticable to have all classes coincide with the average, let us assume that a spread of 3 ADA below this average of 30 is reasonable; in other words, if the average class size is 30, it is reasonable to expect some classes of 27. Table I lists the classes with more than 3 ADA below the average:

TABLE I. ADA and Number of Classes in Inglewood City Schools More than 3 ADA Below the Average 1931-32

Class ADA	No. Classes	Total ADA
26	9	234
24	3	72
22	1	22
20	2	40
16	2	32
14	1	14
Totals	18	414

Eighteen teachers were required to handle these 414 children scattered in classes of approximately 23 ADA. If it is assumed that a spread of 3 ADA below the average of 30 is reasonable, the average class size for this group should be 27 instead of 23. Dividing 27 into 414 gives 15.4 (in practice probably 15) teachers and rooms needed. This would be a saving of three teachers and three classrooms.

In addition to creating extremes in class size, rigid grade grouping has resulted in accelerating and retarding pupils, with a probable tendency toward retardation. Where retardation has exceeded acceleration, rigid grade grouping has also resulted in added costs due

to children "repeating" a year's work—assuming that they do actually "repeat." Some modern psychologists maintain that an organism never does repeat, for after every repetition it is a different organism.

This practice of fitting the child to the school instead of the school to the child, has been considered necessary because it supposedly resulted in homogeneity. A grade was theoretically at least, a step on the educational ladder at which all children were approximately alike. The advent of standardized tests has reduced this supposition to the realm of falsity. A "grade" has been revealed to be not a homogeneous but a decidedly heterogeneous situation. The facts unfolded in 1932 by a testing survey in the Inglewood city schools, then operating with rigid grade grouping, are only typical of the situation as it exists in school systems at large; i.e., the average "grade" ranged from 2.5 to 4.5 years in intelligence and achievement above and below the "normal" for the grade, the range depending upon the grade and the particular function measured. It was not only revealed that there were tremendous differences in achievement between individuals in a given grade, but even within a single individual a significant variation due to idiosyncrasy existed.

Since rigid grade grouping has not resulted in homogeneity, many educators have sought other bases for segregating children into classes. Among these is chronological age and this has been accepted by the Inglewood city schools as a practical administrative basis for assigning children. Three years of operation in Inglewood has revealed that it is a flexible and practical basis which has eliminated the necessity for small classes and for retardation, and concomitantly has decreased the number of teachers and rooms needed.

The theory of chronological grouping requires the principal of a school to arrange pupils in ascending (or descending) order of age. By dividing the number of teachers assigned to the school into the number of children in the school, the pupil-teacher ratio is established. Beginning with the youngest child and going up the scale of ages, including as many children as the pupil-teacher ratio indicates, pupils are assigned to teachers in exactly the same number—or at least nearly so, as rarely is the pupil-teacher ratio a whole number. The resulting grades are then representative of years spent in school and not of arbitrary standards.

Practically, the problem isn't simple. Principals are dealing with human materials, and parents sometimes object to a change in the classification of their children because they think other than in terms of the old grades. Extreme cases of children, judged by a child-guidance conference as not adjusting to a situation, must be considered. There is the constant transfer of children in and out of a school, which disturbs the original assignment. It is also questionable whether it is desirable to have absolute uniformity in class size. There are individual differences among teachers to consider, and it may sometimes be advantageous to assign to one teacher fewer or more children than to another. Then again there are differences among principals in their interpretation and application of the policy.

It is interesting to compare the situation with reference to variability in class size as it existed in the Inglewood city schools for the three years prior to the adoption of chronolog-

ical-age grouping and for the three years subsequent to the adoption of chronological-age grouping. The means and standard deviations of class size are given in Table II:

TABLE II. Means and Standard Deviations of Class Size in Inglewood City Schools 1931-36

Year	Mean	Standard Deviation
1930-31	29.8	4.3
1931-32	30.4	4.8
1932-33	33.1	4.9
1933-34	34.5	3.1
1934-35	33.3	3.5
1935-36	34.8	3.0

Computing the coefficient of variation for the three years combined before chronological-age grouping was in effect and for each of the three years subsequent to it, reveals that in 1933-34 (the first year of the operation of the chronological-age-grouping policy) class size was 58 per cent as variable as formerly, that in 1934-35 it was 69 per cent as variable as formerly and in the year just closed it was 55 per cent as variable as formerly.

Comparisons of variability may be made with seven cities in Los Angeles County approximately comparable in size to Inglewood. These data are presented in Table III:

TABLE III. Means, Standard Deviations and Coefficients of Variation of Class Size of Cities Comparable to Inglewood, and Percentage of Variation of Inglewood's Class Size to Each City

City	Mean	Standard Deviation	Coefficient of Variation	Percentage of Variation
A	33.2	5.8	17.4	49
B	29.8	6.2	20.4	42
C	33.3	4.2	12.6	68
D	32.4	5.4	16.6	51
E	26.5	4.7	17.7	48
F	30.7	5.6	18.2	47
G	27.6	5.0	18.1	47
Cities Combined	29.4	5.8	19.7	43

The above cities operate under a variety of policies and there are other factors present which tend to influence the variability of class size. It is consequently wise to draw only very general conclusions from Tables II and III.

It is probable that the following conservative conclusions may be stated: (1) There is significantly less variation of class size in Inglewood during the three years following the adoption of chronological-age grouping than during the three years preceding. (2) The variability of class size in Inglewood is significantly less than for comparable cities in Los Angeles County.

It may be added that the elimination of small classes has tended to raise the average—as it most certainly must. But it is significant that more than 30 per cent of the classes before the present plan went into effect, exceeded the present median. In other words, about one third of the classes formerly had as large or a larger pupil-teacher ratio than the present median or 50th percentile class. This indicates that there were formerly a goodly portion of large classes. When they are too large, they are a source of discontent among patrons. Even one unreasonably large class may seriously disturb the confidence of parents and may be accepted as typical of the entire school system. These must be eliminated. At the same time, small classes must be eliminated, as they are extremely costly.

After three years of operation under chronological-age grouping, during which the practical application of the policy has been observed, the results of experience have gradually evolved a statement of the local policy on the grouping of children:

1. Chronological age shall be the determining factor for the assignment of children to age levels (grades).

a) The standard size class shall be 35 pupils in average daily attendance to which one teacher shall be assigned, in accordance with the state policy for the allotment of state funds.

Special conditions make it necessary for some classes to be larger than the standard, but the principal shall assign to a teacher no more than three pupils in enrollment more or less than the average number of children in enrollment per reg-

¹Directing Educational Research, Inglewood City Schools, Inglewood, California.

ular classroom teacher in the school, nor shall the principal assign to a teacher more than 39 pupils in enrollment without special approval from the superintendent.

It is difficult to compute the exact economies of the Inglewood grouping policy. Simultaneous with its adoption, mid-year promotions, incompatible with individual differences within a grade, were eliminated. The earthquake of 1933 necessitated many plant changes. Probably the following is a conservative estimate of the financial economies.

The reduction of the number of small classes and its concomitant raising of the average class size, eliminated three classes and the accompanying teachers' salaries, operating costs, and the plant in which to house them. The current expense savings can be estimated by multiplying the total average daily attendance of those three classes (33 ADA \times 3 or 99 ADA) by the cost per ADA. In 1933-34 this was approximately \$76. The total current expense economy effected was therefore \$7,524. The capital outlay economy must be estimated separately. The earthquake of 1933 caused the condemnation of two buildings, including a total of 27 rooms out of a total of about a hundred rooms. A housing survey determined means of providing classrooms temporarily for the existing number of classes without any new building. Housing additional classes would have been an exceedingly difficult problem and could only have been managed by erecting temporary bungalows at a minimum cost of \$1,000 each. To the current expense economy of \$7,524, there should therefore be added \$3,000 for this purpose, making a saving of \$10,524 due to the elimination of small classes.

An added economy resulted in the readjustment of children to their proper age level. Under-age children were adjusted as well as could be done, with parental viewpoints entering into consideration. Over-age children who had been clogging the channels of promotion were placed in their proper age group. The net difference resulted in 160 fewer children in the grades—the many over-aged children had been advanced to high school. This number multiplied by the current expense cost per ADA is \$12,160 saved. This number of ADA divided by the current ratio of 33 pupils per teacher would have meant approximately five classes and of course as many rooms. To the current expense economy must be added \$5,000 for temporary housing, or an economy of \$17,160 from adjusting retardation.

The two sums added together make a total economy of \$27,684 for one year effected through the combined effects of the grouping policy and the elimination of midyear promotions. As the budget for that year (1933-34) was \$262,230, the economy amounted to practically 10 per cent of the total.

In the following two years, economy was effected only in current expense. The saving in 1934-35 was about \$8,068 (assuming that the spread in class size would have been as large as prior to the adoption of the policy). As there were 150 fewer children in average daily attendance due to further reduction of retardation, this number multiplied by the cost per unit of ADA for the year (\$81.50) makes the elimination of an expenditure of \$12,225. The sum of the figures is \$20,293, or about 7 per cent of a budget of \$279,506.

During the year just closed there are about a hundred fewer children in ADA due to further reduction of retardation. This number at the current cost (approximately \$87) makes a sum of \$8,700, to which may be added \$8,600 due to the elimination of small classes. This is a total of \$17,313 or out of a budget of \$267,402 an economy of about 6 per cent.

For the three years then, there has been a theoretical saving of some \$65,000. The phrase "theoretical saving" is used advisedly, as the

reductions in proposed expenditures due to the grouping policy were used to help balance.

It is not maintained that similar economies would be accomplished in every system which adopted chronological age or some similar flexible basis for grouping. The economy, if any, would depend upon such factors, as the variability of the size of class, the amount of re-

tardation, and the utilization of the school plant.

With the situation as it was in Inglewood preceding the adoption of chronological-age grouping, it can be said that significantly large savings were effected to help balance revenue and expenditure without a serious impairment of the educational program.

Economy and Flexibility in Classroom Seating

E. E. Morley, Principal, Heights High School, Cleveland Heights, Ohio

In the order of importance, factors determining the choice of school-seating equipment are comfort, flexibility of use, and economy. In actual practice in many places, the order is usually reversed with the factor of flexibility ignored and "tradition" substituted. It is still perhaps a matter of question in choosing between fixed desks and tablet-arm chairs as to which is the more economical. Some boards of education regard their original investment in fixed desks as covering permanently all necessary costs of seating. If their theory worked out, fixed desks would be the most economical plan. Such, however, is not the case since repairs and replacements of all such equipment must start within a few years.

Adjustability to the size and individual variations in physiognomy of pupils is achieved much more effectively with chairs than with fixed desks. Since in large schools, a pupil seldom occupies the same seat more than a single period during the day, adjustments on fixed desks are impractical. A few chairs in each room with shorter legs accomplish the purpose much more effectively.

Adaptation to Use

The factor of flexibility of use largely determined the school board's policy in Cleveland Heights in equipping all regular classrooms in both junior and senior high schools with tablet-arm chairs. With these movable seats, classes may be seen at any time in the senior high school arranged in various ways. A history teacher, for example, will have her desk in front with the pupils seated in a single row around the walls. Easy informality of conversation is thus encouraged since each pupil is in a position to see everyone else without turning his head. In another room, chairs will be found in little chummy groups scattered around the floor for committees to work. In a mathematics room, about a third of the chairs will be over against the wall and the rest arranged in three or four rows facing the teacher's desk. Pupils near the wall are doing seatwork, while those facing the teacher are receiving special instruction on difficult points. In another mathematics room, part of the chairs are arranged in two rows facing the front blackboard and the rest facing the blackboard on the opposite wall. In the space between, the teacher stands and directs the work of the faster and slower divisions which are thus separated from each other. A class in commercial law will often have a chair placed appropriately for the judge, another for the witness, a group of chairs for the jury and a table for the lawyers. There is no limit to the ways movable chairs may be placed to promote reality in classroom situations. A few teachers, however, still prefer their pupils arranged in files and rows.

The Cleveland Heights school board finds the cost of original equipment about one third of that of fixed desks and the cost of upkeep also less per unit. Hall lockers, of course, provide safe storage space at low cost for pupils' wraps and books. Teachers, on the other hand, prefer the movable chairs from every standpoint they are—hygienic, flexible in use, and economical.

Some matters regarding school seating perhaps may best be made clear by a few questions and answers.

1. Are the tablet-arms practical for work requiring the use of pen and ink?

Answer: Most pupils use fountain pens. The writing surface on the chair-arms is as smooth as any desk.

2. Where do pupils put the books they are carrying with them?

Answer: In the racks under the seats.

3. Is there excessive noise and confusion in getting pupils settled down and arranged for the period?

Answer: Surprisingly little noise and no confusion is noticeable. Informal classroom activities always involve some noise. Only in the routine of prison life and in cemeteries can undisturbed silence be maintained.

4. Do teachers experience difficulty in learning the names of their pupils when their seats are rearranged often?

Answer: Until the teachers learn to know their pupils, seats are usually placed in rows and files. After two or three weeks, rolls are taken as readily as though seats were in fixed rows.

There is no essential service of classroom seating which movable chairs do not provide. There are many advantages, on the other hand, which would be quite impossible without them. The board of education has found its original cost of installing movable chairs less than a third as great as fixed desks and the upkeep no greater per unit.

TEACHERS' SHOP TALK

The advantages of teachers' shop talk which helps sell education was discussed in a recent public address by Mr. D. W. Parratt, a member of the board of education of the Granite School District, Salt Lake County, Utah. Said Mr. Parratt:

"Teachers will talk shop. They are like other citizens in this respect, for, try as they will, other people with whom they talk will not permit them to leave 'schoolwork at school.' In a sense this is a splendid thing, for it affords big and effective opportunities for school publicity and for 'selling' education. Every teacher is a potential 'salesman,' with her customers asking for the goods, and fortunate indeed is the teacher who has an abundance of proper, reliable information to offer. To meet the inquiring public, she should, therefore, be adequately provided with clear knowledge relative to the general policies of the school system, with financial data, new movements, administrative difficulties, and the like, which too often are not made accessible to the classroom teacher."

"The superintendent who recognizes the importance of this aspect of publicity aims to keep his entire teaching force informed on these and other similar matters. Frequent circulars sent by him to the teachers, through the principal's office, deal with tax problems, school revenues, budgets, relative costs, supervisory questions, organization difficulties, new policies, and so on, and these often become the subjects for consideration in building or faculty meetings. As a result, the teachers become better informed regarding some of the problems basic to their welfare and to the welfare of the schools. With this additional insight they develop an increased interest and responsibility in the schools and in consequence become better and more efficient salesmen in the cause of education."

"Thus a well-informed body of teachers becomes a powerful factor in school publicity and the results obtained are doubly valuable because they are secured by the inquiring public so quietly and unconsciously and without ostentatious display or arousing antagonisms."

The Relation of the School Administrator to the Classroom Teacher¹

Cornelius J. Heatwole, Richmond, Virginia

The genius of the American school system may be found in its independent units of state organizations. These units are operated independently of each other and have evolved along parallel lines and patterns. It is interesting to observe that all of the state systems have much in common, but share no legal federal administrative head with directive power of control. The general school-administrative setup in each of the states is so much alike that one looking at a picture of the plan would observe but little variation. Differences would only be detected when one comes to examine into the powers and duties of school-administrative officials and their relation to each other. At the apex of the organization in each of the states is an official designated as state superintendent of public instruction or commissioner of education. Under him may be found a line of subordination reaching to the classroom teacher. It happens that the primary thing for which the school system exists goes on in the classroom, namely, that of instruction. All the varied activities and duties performed by so-called superior school officials are ancillary to this principle of education.

The classroom teacher then, occupies a pivotal and strategic position in the entire school system and should have the thoughtful consideration and direct help of the school administrators. She is entirely dependent upon them for everything she needs, from her salary to the most minute physical equipment of her classroom and necessary teaching materials.

The Gap Between Administrator and Teacher

She is so far removed from her superior official, her requisitions sometimes become lost in the long line of red tape. For these and other reasons there is danger of neglecting some essential needs for the complete performance of instructional duties, and failure to understand and fully appreciate the problems and difficulties the classroom teacher encounters.

Being so far removed from her officially, the administrator may not realize how he can help her when and where she most needs it. Out of such conditions have often come expressions and acts of disloyalty. We now have some evidence of the development of such a spirit. It is a well-known principle that the success of an administrator or executive rests largely upon the loyalty of those who work under him in the system.

In the course of a half century or more, especially during the period of the past two decades, public education has come to be recognized as one of the most important functions of state government. There have been expansions in public expenditure for schools, a large increase in enrollment of pupils, and a consequent increase in the number of teachers and administrators necessary for the efficient operation of the school system.

The system has rapidly grown more complex in its managerial aspects. There has been a spread of types of instruction. Specialization has characterized all educational progress, resulting in a large increase in workers and a redefining of official duties.

All of this has tended to widen the gap be-

tween the school administrator and the classroom teacher. The latter finds herself further and further removed from the head of the system. The administrator has redefined his function, drawing the limits of his activities and duties away from the immediate things concerned with direct instruction.

The Function of Administrators

There are still many administrators, especially principals of large urban and consolidated schools, who rightly regard their major function as having to do with the course of study and efficient instruction, but there is a growing tendency among even these school officials to limit their duties to the fields of school finance, school-building construction, selection of textbooks, the appointment and assignment of teachers, and other business aspects of education.

These, they conceive, have the largest claim upon their time and energy. There is a distinct tendency on the part of the school administrators to adopt the techniques and follow the methods of the industrial executives, whose main energies are occupied with speeding up production, meeting payrolls, and declaring dividends.

The operation of a school system can never be like the operation of a factory, or a large utility concern. The school administrator has a payroll to meet, it is true, and pays dividends, but these are not dependent upon production or a standard product with physical dimensions.

The foregoing is a sufficient background and setting for further and more specific discussion of some of the relations of the school administrator to the classroom teacher.

The Evolution of the American School Teacher

One of the most interesting social phenomena is the evolution of the American school teacher. Her responsibilities have increased manyfold in the past two decades. The accompanying stress and strain upon her physical and mental endurance have begun to show evidence of a breakdown under the added pressure. Standards relating to her immediate field of work are rapidly becoming more and more exacting.

To begin with, the academic standards of requirements for certification are constantly being raised so that the school teacher as a professional and intellectual worker is now not different from those persons in other lines of intellectual and professional pursuits. High-school officials are just about ready to announce that no one shall teach, even in the elementary school, who has not earned a college degree.

After her appointment as a teacher in a school system, she is reminded that she is on probation for a period of years. This is her first occasion for fear and mental anxiety. Added to the stress and strain of the regular daily duties of the classroom, she finds her difficulties multiplying from year to year as she continues to teach.

She finds a flow of requisitions from superior officials gradually increasing in number and difficulty. The newer semiadministrator, known as the supervisor of instruction, is now coming in increasing numbers with additional exactations upon the classroom teacher. These newer school officials more recently added to the

school system have not yet completely found their right and proper place in the schools, nor have they learned the proper techniques of their delicate function and art.

The Burdens of Routine

To all of this is added the stream of inquiries and report blanks to be filled out from the far-away superintendent or principal, calling for extra clerical work in and out of the classroom. The more recent emphasis upon curriculum revision falls heaviest upon the classroom teacher and requires extra energy and effort. She normally aspires to promotion in the system and rightly looks to her superior officials for this promotion. If it does not come in the natural course of events, she is disappointed and broods over the failure.

All of these accumulated circumstances tend to bring added stress and strain on her physical and mental endurance. She, of course, must meet wisely the delicate problems that arise among the patrons of her thirty or forty children, and criticized at times by the people and even the legislature for teaching the facts of so-called poisonous doctrines.

She accumulates through the years as she teaches, personal, social, family, and religious responsibilities. These, added to her classroom duties as a teacher, almost rob her of the pleasure of a normal private life to which she is entitled.

Problems of this sort are likely to pile up in some cases in the course of a teacher's life until she is brought to a state of mind where she cannot do her classroom work satisfactorily to herself and to her superior. Such a teacher needs a sympathetic and helpful friend. She has a right to expect such a friend in the superintendent or principal.

Is There an Occupational Disease?

Are teachers unnecessarily breaking down physically and mentally under the strain and stress of modern education? Are the accumulated facts ascertained by careful study in the field of mental hygiene to lead us to the conclusions that there is such a thing as an "occupational disease" of American school teachers? Let us see.

In 1894, a number of years before the mental-hygiene movement began, Galton made a study of teachers' health and found that 20 per cent of them were suffering from serious nervous breakdown. Burnham in 1904, and Terman in 1914, made studies of mental health of teachers, and found many cases of emotional instability; they applied the terms "neurotic" and "neurotic" to cases found and admonished school officials to minimize these cases, recommending that mental hygiene be taught in teacher-training institutions.

Later, other studies were made to ascertain the causes of absences from teaching, and it was found that about 10 per cent of these cases were due to nervous disorders. More recent studies have been made, using some of the more recently devised objective personality tests, and examining hospital records of maladjusted teachers in the effort to determine causes and degrees of mental instability among teachers in general. Here it was found that married teachers were less neurotic than single ones, and men teachers less than women. One very recent study shows that neurotic conditions were twice as prevalent among women as among men teachers.

Still other studies attempted to ascertain

¹A paper read before the Conference of School-Board Members and School-Administrative Officials, Peabody College for Teachers, Nashville, Tenn., June 13, 1936.

the influence of mentally unstable or maladjusted teachers upon pupils. Really this is the basic problem for making a study of the mental health of teachers. While as yet the results of this type of study are not to be taken as fully reliable, it is reasonable to assume that, if a teacher is of a hyperemotional type, she tends to disturb her pupils emotionally, but if she is emotionally stable, she tends to bring about emotional stability among her pupils. Much study is yet to be done in this field, and school administrators will be tremendously interested in further developments. Further study of this type, using more reliable techniques than have been available, will be of tremendous significance to the schools and school children.

Mental and Emotional Instability

I am told that health officials and certain insurance companies have accumulated statistics which point to the fact that the occupational disease of the school teacher takes some of the forms of psychoneurotic and psychogenetic disturbances, tending toward delusions and personality quirks, growing out of conditions under which they work. These statistics, I am told, are for the time withheld from publication.

All of the studies so far made and published on the mental health of the school teacher are in general agreement that the number of cases of teachers in our schools suffering from varying degrees of mental and emotional instability makes it of sufficient importance to be brought to the attention of school boards, superintendents, and principals.

We must at least agree from all of the factual evidence we have that there does exist a problem of mental and emotional instability in the teaching profession. Very recent studies distinctly point out that there is a percentage of teachers now suffering from varying degrees of psychoneurosis.

These studies indicate that anywhere from ten to twenty per cent of teachers are suffering from varying degrees of mental illness. One recent unpublished report finds a very much higher percentage of teachers who are psychopathic. We now know enough about this problem to be concerned about the mental health of teachers and, if possible, to do something about it.

Some Practical Implications

From these studies the writer ventures to indicate some practical implications; among these are:

1. Administrators should attempt to prevent the teaching profession from becoming a refuge for people unable to make proper adjustments to the various physical and social situations of life.

2. Townsend, in his study, suggests that in the course of twelve years, the child will come into contact with at least two such maladjusted persons in teaching positions.

3. Mental health should be a cardinal aim of school training. One teacher suggests that if this rush is kept up, the profession is going to defeat its own ends by making good teachers die young "professionally."

4. School-board members and school administrators need to recognize the need for a very definite training for themselves in order that they may intelligently and competently select and retain superior teachers.

5. Some kind of disability fund should be established to enable teachers threatened with nervous breakdown or ill health to be assured of needed rest and hospitalization in order to avoid more serious trouble.

6. Retirement systems are recommended.

7. Promotions should be based upon the ac-

tual skill in teaching, as well as upon the length of service and degree of preparation.

8. Travel, as well as study, should be encouraged by giving some increase in salary on the basis of so many weeks of purposeful travel.

9. School administrators should give to teachers the same individual privileges and rights that any intelligent self-respecting citizen may possess in regard to their amusements and methods of using leisure time.

10. Superintendents and principals should avoid all unnecessary and lengthy faculty meetings and should encourage wholesome recreation.

11. School administrators should reduce to a minimum the amount of clerical work required of teachers and avoid unnecessary reports.

12. Supervisors should seek to have their teachers regard them as helpful counsellors rather than as rating masters or harsh critics.

The immediate years to come will probably bring us more exact and reliable information on the subject of mental health of school teachers, and school administrators will be interested in finding practical ways of dealing with the problem.

A Growing Sense of Solidarity

There is one other aspect of the problem which should be mentioned. It is one that should challenge the thoughtful consideration of school administrators everywhere. I refer to the growing sense of solidarity among classroom teachers all over the country. They are beginning consciously to realize their importance and potential strength.

In number they obviously comprise the great majority of persons connected with state systems of public education, and in the past decade or more they have developed among themselves some outstanding aggressive leaders who make strong appeals to the classroom teachers to organize for the purpose of protecting their special interests and defending their personal rights as citizens and professional workers.

They now have strong organizations in every state, and their national organization affiliated with the National Education Association is growing more powerful as a factor in determining the policies and plans of that nation-wide organization.

More recently their discussions have developed into a mild spirit of antagonism and a

lack of proper kinship and attitude toward their superior school officials. They feel that school administrators in their preoccupation with their own differentiated fields have forgotten them, or certainly they think they detect a tendency on the part of school officials of their showing a disinterest in the requests and demands of the classroom teachers.

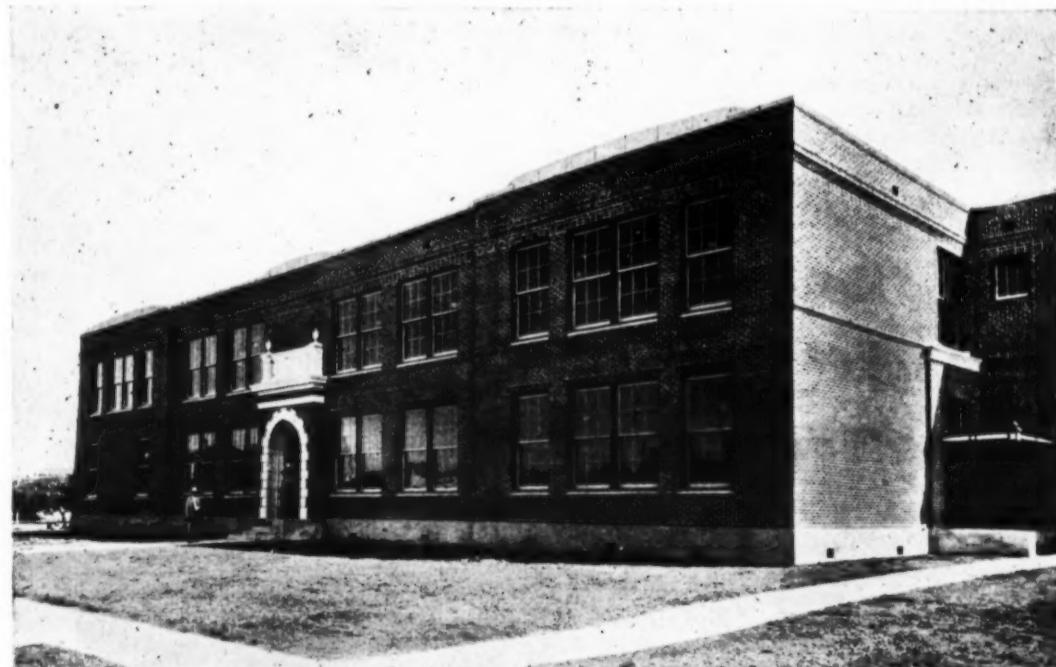
Even in their public discussions they have become vocative in pointing out wherein the classroom teacher fails to get the proper consideration at the hands of school boards and superintendents. Many of their leaders, after failing to obtain satisfaction, working through the established local, state, and national professional education organizations have urged that they withdraw from these and look elsewhere for effective relief.

They are now joining labor unions in great numbers. I am reliably informed that over 20,000 teachers in America are now identified with the Federation of Labor for the reason that they see greater possibilities of obtaining the objectives they seek.

If you ask any of them why this shift in organized affiliation, they invariably reply that the regular professional organizations do not vigorously champion the welfare and demands of the great mass of teachers. They harbor a distinct feeling that school administrators, who mostly control and dominate the policies of education in general, and especially their regular professional state and local organizations, fail to defend and protect their personal rights and professional interests.

Some administrators will contend that all of this so-called lack of kinship and unity of interest and appreciation is without foundation in fact, and that all of this is an imaginary conflict based upon a few instances, but we cannot dismiss the matter on this ground. It is of sufficient meaning for the future of education to recognize it as one of the problems that should receive thoughtful consideration.

If the claims of the classroom teachers are exaggerated or even unfounded, it is but reasonable for the school administrator to take cognizance of it and attempt to do something about it. It is certainly a condition that calls for study and effort to alleviate the difficulty by an honest attempt to meet the problem. The facts must be recognized that the apparent conflict, if permitted to continue to be agitated, will result in harmful effects to both the system of public education and those engaged in its promotion.



THE CHARLES W. CROSSLEY SCHOOL, CORPUS CHRISTI, TEXAS

The Crossley grade school at Corpus Christi, Texas, has been completed through the erection of an addition, including a gymnasium-auditorium and classrooms, costing \$48,000. The building has thus been made a serviceable unit for a well-balanced grade-school program.

The PWA made this project possible by a grant of \$14,400.

A Superintendent's *Check List* for Evaluating Elementary-Grade Teaching

Mildred A. Dawson*

An eminent authority on teacher-training and supervision has stated that a grade supervisor for elementary-school teachers—if needed at all—has fulfilled her function when she has initiated the inexperienced young teachers into their jobs and watched over them for the first two years of their teaching. Henceforth, he maintains, supervision is the work of the grade principal or, in the smaller school system, of the superintendent. Current practice seems to support this view, yet frequently the superintendent has had little training and absolutely no experience at the elementary-school level and, even if he is fortunate enough to have time available for supervision in the grade school, scarcely knows for what he should look nor what academic policies his elementary teachers should adopt. Such was the predicament of a group of superintendents who enrolled this past summer in an advanced course in education which features a survey of elementary-school methods. They requested help in setting up a supervisory program based on the essential features of an efficient and reasonably progressive instructional program in the elementary school. The students in this class formed into committees, each of which dealt with a particular branch of study in the elementary school. Their research into the literature of currently approved methodology culminated in a check list to guide superintendents in formulating a desirable program to be followed by elementary-school teachers and to help them in checking on the instructional procedures employed by their teaching staff. This article presents the check list as devised by this group of advanced students.

The check list as presented can be used by superintendents and principals anywhere, inasmuch as well-authenticated methods of teaching are the same regardless of whether the schools are located in a village or a metropolitan area, or whether the school system is small or very large. If the ready-made check list be adopted as the basis of supervision, the teachers should—through bulletin or staff meeting—be acquainted with the items in the list. They, under the guidance of the superintendent or principal, should select a particular subject the teaching of which is in special need of improvement or, instead, they may select a limited number of techniques suggested in the check list for particular emphasis. For instance, the introduction of a diagnostic-remedial program, of a schedule of "how-to-study" lessons, or of a part-time "activities program" may be the objective of the current year's work. At any rate, the supervision should be democratic, the teachers and administrator working together for the improvement of the school's program.

Far better than the adoption of this ready-made check list would be the local school staff's devising of a similar list of its own, the objectives for teaching the various subjects featured in the elementary-school curriculum being the point of departure. By so doing, the staff could more certainly insure that the ensuing supervisory program would fit the local situation and that the points of greatest emphasis would be best adapted to meet local needs. Probably the greatest value of a self-made check list is that the teachers involved in formulating it will be interested and intelligent in carrying out the supervisory program which is the outgrowth of the list.

Regardless of the source of the supervisory check list, it can be made truly functional in improving the instruction of the school. The list can be used as a basis of a self-survey by the members of the teaching staff. It can be the point of departure for a "drive" to introduce new teaching procedures or to improve those already in use. It can suggest to the superintendent or principal the supervisory program to be featured in any particular year. As a guide in selecting and evaluating the procedures to be given attention in supervisory visits, the list can prove a most practical aid. Too often, the superintendent and teachers of a school fail to have a special objective for a year's work and, like a rudderless ship, do not get anywhere in particular. All schools should have a definite an-

nual program of objectives if there are to be progress and professional growth. Such a check list as the one that follows can be used to stimulate the formulation of such a program.

The points included in the check list presented were based on the major objectives for teaching the various subjects. Generally the points emphasize an enrichment and meaningful background of experience, thorough mastery accomplished by differentiated and properly administered diagnostic-corrective procedures following upon objective and comprehensible presentation, attitudes of appreciation and interest, creative opportunities, and introduction to lifelike and practical experiences. The first section of the check list includes points which are applicable to the teaching and learning of any of the subjects included; those following feature the objectives peculiarly significant for that subject under which it is listed. No claim is made that the list is complete. It simply presents those objectives that a particular group of superintendents in a western state felt to be important in their particular situation. Nor is it claimed that the list is especially objective in its use of a rating scale of *Excellent*, *Good*, *Average*, *Fair*, and *Poor*, to be abbreviated respectively by *E*, *G*, *A*, *F*, and *P*. The check list is not intended as a base for comparing the work of one teacher with that of another. Rather it should be used to determine general points of emphasis in a school program, to reveal phases where the program is strong and weak, and to indicate where the instructional procedures need modification and re-enforcement.

The check list follows.

SUPERVISORY CHECK LIST¹ FOR INSTRUCTION IN ELEMENTARY-SCHOOL SUBJECTS

General

To what extent

1. Was a definite purpose evident
 - a) on the pupils' part?
 - b) on the teacher's part?
- Was the purpose sustained?
- Was the purpose worthy of attainment?
2. Are the pupils enjoying the subject?
3. Is emphasis put on *pupil* activity and responsibility?
4. Are there creative opportunities?
5. Are the pupils being trained for independent study?
6. Is there differentiation in materials and activities to provide for variation in ability, needs, and interests?

Reading

To what extent

1. Are the pupils getting a background of experiences for reading? (Consider especially the child of foreign parentage and meager background.)
2. Is there adequate provision for
 - a) training special groups in phonics?
 - b) developing ability in word recognition?
 - c) giving remedial attention in pronunciation and annunciation?
 - d) building enriched vocabulary—both in speech and in reading?
3. Is there a wide and varied program providing for all reading abilities?
4. Are pupils voluntarily reading good materials outside of school?
5. Have the poorer readers' difficulties been diagnosed? Is remedial teaching suited to individual needs?
6. Does the teacher have a definite program for developing good comprehension and an optimum reading rate in the middle grades?
7. Is there a balanced ration of silent and oral reading?
8. Is there a proper balance between pleasure reading and training lessons?
9. Is there a definite program for teaching study skills? Does it provide for practical use and review of these skills?

Language

To what extent

1. Are the pupils interested and spontaneous in expression?
2. Is their presentation pleasing?
3. Are the pupils given many opportunities to express themselves to an audience?
4. Are the teaching situations lifelike (based on "functional centers")?
5. Are the pupils conscious of, and progressing toward the attainment of, the objectives assigned to the grade?

¹When the Check List is used, five vertical columns are drawn at the right and headed respectively, *E* for *Excellent*, *G* for *Good*, *A* for *Average*, *F* for *Fair*, and *P* for *Poor*.

6. Is the teacher using appropriate techniques in improving composition?
 - Models
 - Standards
 - Self-appraisal
 - Socialized criticism
 - Abundant experience
 - Subject matter of which the pupil is absolute master
7. Are the topics intimately connected with other lessons and out-of-school life?
8. Is language taught all day long?
9. Are the lessons integrated into units?
10. Is creative expression encouraged?
11. Is there a definite system for noting and keeping record of usage needs? Is there systematic practice on ascertained individual and group needs?

Spelling

To what extent

1. Do the pupils have economical study habits for learning new words?
2. Does good spelling carry over into written work in other classes and out of school?
3. Have the learning difficulties of poor spellers been diagnosed? Are the proper remedial measures being taken?
4. Is there a definite system of checking individual "demon" lists?
5. Is use made of the opportunity for
 - a) applying instruction in phonics?
 - b) expanding word meanings?
 - c) training in syllabifications?
 - d) instructing in word analysis—prefixes, suffixes, stems?

Social Studies

To what extent

1. Are lessons utilizing opportunities for
 - a) using the social environment?
 - b) enriching the pupil's background of experience?
 - c) learning through activities?
 - d) developing proper social attitudes?
2. Are the problems of the individual, the community, the nation, and the world being tied up with the social studies?
3. In a controversial situation, does the teacher see that both sides are presented? Does the teacher remain impartial?
4. If the social studies are taught as separate subjects, is the relation between them being stressed? If an integrated program is followed, does each phase of the social studies get its fair share of attention?
5. Is there a careful check to ascertain whether there is adequate mastery of the tool subjects; e.g., reading, spelling, language technicalities?

Natural Sciences

To what extent

1. Are the pupils being inducted into an understanding of their immediate natural environment?
2. Are the pupils, through vicarious experience, extending their knowledge of the far-away?
3. Is learning based on pupil's activities?
 - Excursions
 - Independent observation
 - Demonstrations
 - Simple experiments
 - Simple practical repairs
 - Sketching
4. Are objective materials used in lessons?
5. Are pupils developing habits of thoughtful observation?
6. Do pupils voluntarily seek further contacts with natural phenomena?
 - a) through reading?
 - b) through looking at pictures?
 - c) through actual experiences?

Arithmetic

To what extent

1. Are the pupils being given a background of meaningful experience?
2. Are opportunities to teach arithmetic incidentally being utilized?
3. Does the teacher adapt the arithmetic lessons to the pupils' experiences at home and in the community?
4. Is informational arithmetic receiving the proper emphasis? (History of number system, money, time, measures.)
5. Is essential technical vocabulary developed and used?
6. Is there a systematic program for fixing and maintenance drill?
7. Is the initial error avoided by
 - a) a rational approach to new processes?
 - b) careful supervision of early practice?
8. Is there a thorough inventory system to determine needs, progress, and mastery? Is intelligently directed corrective attention being given?

*Assistant Professor of Elementary Education, University of Wyoming.

THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

WM. C. BRUCE

Small School Boards Employ Press Representative?

IF THE question were asked whether the activities of the schools of this country are adequately and satisfactorily reflected in the public press, the answer might be in the negative. It might at once be said that while the unusual and sensational happenings are given publicity, the worth-while things done in the schools do not receive the proper attention. The publication of the activities engaged in by a school system depends largely upon what a newspaper reporter regards as news.

The conflicts which have arisen in recent years, between the school authorities and the newspapers, have grown out of the fact that some of the former have, and continue to transact their business behind closed doors. In turn, the policy of holding to executive sessions has been due to the flippant, fragmentary, and superficial accounts given of administrative deliberation and professional activities. At any rate, the school authorities in the smaller communities have become wary of the average newspaper reporter and feel themselves compelled to maintain a conservative attitude toward them. Many of the larger school systems throughout the country are well provided with publicity facilities. Someone connected with the administration is delegated to make a record from time to time of the activities engaged in and likely to prove of interest to the press and the public. In the smaller cities, no definite plan obtains.

The superintendent is usually the fountain head from which school news is issued. Sometimes the secretary is the spokesman for the school system. If these individuals possess a proper news sense, the school doings may be adequately reflected, provided the press representatives accept the facts given them.

A school committee in a small New England city, in the desire to have its deliberations and conclusions adequately and correctly reported in the public press, recently employed its own reporter on a part-time basis. It becomes his duty to prepare news matter concerning the school system and to supply the regular press representatives with the same.

If the employment of a reporter on the part of the school authorities is not deemed either feasible or desirable, it still remains that the board of education must designate someone identified with the school system, one who possesses a sense of news values and who is able to prepare matter for the public press. The average newspaper reporter will welcome the aid thus afforded him.

How Accessible Shall the Superintendent Be to the Public?

IN SOME eastern cities, the complaint has found expression in the public press that the superintendent is an exclusive personage and that citizens who have business with him find that he is not as accessible as he should be. One newspaper says that it is easier to see the governor of the state than it is to make a contact with the local superintendent of schools. The latter is secluded in some inner room, fortified by clerks who announce to visitors that the distinguished school official is in conference and cannot be disturbed. At least, so the story goes.

It is a common complaint that the superintendents in the smaller communities are less accessible than those in the great centers of population. The chief executives in the larger cities seem to have learned to delegate duties to their assistants, and to find time for visits with citizens, representatives of the press, members of the school board, in fact anyone who has a legitimate call upon their time and attention. Many of the superintendents in smaller towns

seem to suffer from a crowding up of detail which make it impossible for them to find time for visitors.

The school superintendent must inevitably budget his time judiciously in order to comply with the legitimate requests of those who have a call upon his time. He must discriminate between important matters of business and trifling details. He must learn when and how much time to give to board members, supervisors, and other official associates, to representatives of the press, and to citizens of the community. Finally, he has a very real duty to give time and attention to representatives of publishing houses and of manufacturers of school supplies and equipment, and to local business people. Experienced bookmen and competent representatives of school manufacturers invariably have information which the superintendent requires and which is administratively valuable.

The superintendent in any but the smallest schools has duties which are sufficiently exacting and extensive to keep him busy longer each day than the usual eight hours of the business day. If he is at all a student, a man who plans for the future, and who reviews the reports and official statements of his associates and subordinates, he must apportion his time wisely, and discriminate between those who have a call upon his attention and those who have not. He must be a diplomat as well as an educator, and keep his office on a level keel by tactfully refusing to see some people, and by limiting others to a talk of a few minutes.

There is probably not a school superintendent anywhere who cannot at the close of a day's work, recall a waste of his time due to a caller whose business was of minor importance, who talked much, and said little but who took a lot of time in doing it. Such nuisances cannot be excluded as readily as this would seem desirable.

Those who charge that the superintendent is a high-brow, exclusive, and nonaccessible individual should familiarize themselves with the daily crop of callers that would invade his office, and ascertain the facts as to the manner in which he spends his time before entering upon such charges. We are inclined to strongly discount the criticisms which are occasionally heard but seldom verified.

Taxation and Adequate School Support

IT WAS not until recent years that the educators of this country concerned themselves in any manner with the subject of taxation. In their efforts to secure more liberal support for the schools, they were confronted with the problem of locating tax sources that would make such support possible. They met the challenge with reasonable proficiency and completeness.

In entering upon the subject of taxation with its bewildering ramifications and involved considerations, the educators gradually clarified the atmosphere, simplified the problem, and reached logical and sound conclusions. They learned that, while a variety of revenue-raising laws are being administered, the scheme of revenue-producing rests mainly upon the two tried and fundamentally sound methods, the property tax and the income tax.

Whatever may be said about the merits of this, that, and the other experimental tax scheme, it remains that there is greater need of refining and bringing to a more equitable basis, the tax instruments that have proven their utility and dependability. The suggestion which has been urged recently in several states that the property tax be abolished, and that the income tax be adjusted to assume the entire burden, is fallacious and cannot be seriously considered. There is no country in the world that has deemed it expedient to entirely drop the property tax. While the income tax is quite equitable and to a degree inclusive, it does not, and cannot in the nature of things, meet the situation with completeness. There are forms of wealth which are not covered by the ability-to-pay principle. They must be reached through a property tax.

While the educator has studied the subject of taxation in its fundamentals, appraising the experiences of time and territory, he must look askance at radical reforms and at the many panaceas which are proposed from time to time by overzealous experts and which at best can only serve as temporary expedients.

There are deep-seated reasons for the defects of the property tax. These cannot be eliminated without a long and painful process of adjustment of the burden on homes and farms, and, in some sections,

on business property. New and better methods of fixing values and levying assessments are needed — perhaps along the lines of some of the English or German principles. It is true, too, that other forms of taxation should share the burden, and the income tax should be given a wider base, with a distribution of the burden on greater numbers.

May Teachers Become Politically Active?

A BOARD of education in Ohio has inserted in its employment contracts for 1936-37 a clause which forbids teachers in the local schools from engaging actively in political campaigns. The clause applies to general elections, and mentions school-board elections specifically. The action quite naturally has met with opposition on the part of teachers.

The issue involved is not a new one. It arises in communities where teachers have taken an active part in election contests and where the aftermath of such activities has left resentment and opposition against individuals and teacher groups.

It is universally held that teachers should exercise all the rights of citizenship and should give a good example by voting for the candidates of their choice at the ballot box. Like other citizens they are entitled to their opinions on party principles and public policies and to the expression of these opinions. It is another matter, however, to enter the political arena and openly to promote this or that candidate or champion the cause of any political party. The reactions here may lead to embarrassing situations and invite opposition to the teacher group and to the individual teacher-politician.

For teachers as a class and individual teachers as their leaders to openly champion this or that candidate for the board of education entails hazards. If the teachers' candidate wins out at the election, well and good; if, however, the opponent who has been fought gets into office, it is only natural that he express his resentment in official action. Much could be said as to the eventualities arising out of such a situation precipitated by the professional workers. After all it is presumptuous for school employees to attempt to decide who shall govern the schools. That duty belongs to the citizenship as a whole and not to one class.

It would seem that the proper extent of the teachers' activity as a group and as individuals is to make clear through the press and otherwise the facts of the local situation and vigorously to advocate educational, administrative, and other policies and reforms on the basis of their true merit. The citizens as a whole can then decide what policies and programs they want to support — whether these involve expansion of the instructional program, increase in salaries, enlargement of the school plant, or what not. In doing this there is ample opportunity for a full expression of the rights of citizenship. Beyond this point the support or opposition of candidates is likely to deteriorate into personalities and animosities which inevitably reduce the public respect for the teachers.

Professional Courtesy

THERE have been periods in the history of popular education when the school administrators encountered difficulties in locating acceptable candidates for the positions they wished to fill. The migrating of teachers and superintendents from rural to urban centers, from the village to the larger city school systems, was an accepted occurrence. Somewhere ahead there was offered for the ambitious schoolworker a wider field of service and more attractive compensation.

That situation no longer exists in the same degree. Changes in positions have become less frequent. The professional teachers and supervisors hold to what they have rather than look for more congenial and "broader fields of action." The executives too, have become more conservative and circumspect. The tendency still is to hold down, rather than to expand the lists of schoolworkers. Home folks receive preference — even in the large cities.

In spite of this general situation, we have seen in recent years the evidences of unseemly scrambles for positions. A mere hint that a vacancy might occur has sometimes brought to the forefront applicants for a position who have ignored all of the proprieties of the situation. Some of these individuals have been ready to elbow

the incumbent out of office, without waiting to learn whether he desired re-election. They have engaged in political and personal intrigue to gain their ends.

In the light of all this, it is gratifying to know that there are educators who will not consider an appointment unless they are assured that the incumbent is out of consideration and that there is an actual vacancy. In a city of the Southwest, an incident came to light recently, which denotes the true professional spirit that exists in the professional ranks. A high-school principal was, without his knowledge or consent, elected to the local city superintendency. He refused to accept, believing that the person who had been the superintendent for the past nine years should be retained. It was only after he learned that the incumbent had been definitely voted out that he accepted the appointment. The board of education saw his point of view and expressed its respect for him.

It would seem that the educators ought be the first of all professions in observing the ethics of not seeking a job so long as the man in office desires it and has not definitely withdrawn. The national and state organizations of superintendents might well express their opposition to bad practices by disciplining such unworthy schoolmen and women. The school boards have an effective remedy in their hands: Every such applicant should be automatically eliminated from all consideration for the office under change.

What Should Be the Life of a Schoolhouse?

A N UNSOLVED problem in the economies of school-building construction arises from the growing tendency toward lengthening the life of the structure by the use of permanent materials. The theory of architects and builders is not unlike that of the ancient craftsmen who built castles and manors, churches and monasteries, for all time to come. The present-day builders seek true economy in designing and constructing school buildings by using a quality of materials which will be the "cheapest in the long run." Such important matters as minimum of upkeep, long wear without failure even under heavy use by children, absolute safety against dangers of corrosion, resistance to the elements, are all taken into account and provide satisfactory economic reasons for the choice of materials which, though high in first cost, are long in wear and free from annoying upkeep.

This type of school building which was erected before the introduction of steel and concrete and some of the newer synthetic materials, was not without its advantages. True, the cheapness and ready adaptability of wood to floors, roofs, partitions, and stairs rather limited the life of these earlier buildings. The very shortness of life of wood interiors has made it possible to find a publicly acceptable reason for razing such buildings and replacing them with structures better fitted to the new program of education and to the changed methods of class organization and instruction. The very permanence and the difficulty of tearing down the newest buildings of reinforced concrete, steel, and stone, will make boards of education hesitate to rid themselves of these buildings, even after they have become educationally obsolete.

It is the problem of educational obsolescence which must be taken into account in all new school-building projects in arriving at a true estimate of the economies of selecting forms of construction. In the large cities, the decay of neighborhoods with the consequent loss of enrollment, is a factor which points to the folly of "building for a hundred years." If any number of the current movements for progressive education materializes, it is likely that the schools of fifty years hence will hardly be recognizable on present standards of organization. It is only necessary to study the ideal floor plans of the eighties and nineties of the last century to appreciate that change and improvement are the result of laws from which there is no escape.

While school boards may hesitate to adopt flimsy constructions, or to introduce the radical forms and the materials which were used at the recent Chicago Fair, they may well study this whole problem. Perhaps the solution will be found in the use of less expensive materials which are fire- and corrosion-proof. Certainly, greater attention is needed to make school buildings flexible, reasonably adaptable to change, and not excessively costly.

School Museums at *Federal Expense*

C. E. Hagie, Pb.D.¹

The most valuable educational laboratory we have in our community is a general museum provided entirely by WPA funds. It was almost entirely by accident that I discovered there was such a thing as a "WPA Museum Project." I happened to be in the office of the State Director of Professional and Women's Projects when presidential approval came through for such an enterprise, and because it was new the state director wanted to get one going. Being museum-minded I fell an easy victim, with the result that we soon found our school the sponsor of the first project of its kind in the state.

We were very fortunate at the outset, to have museum-minded people heading both the state and district offices in the division of professional projects, for, as we have found, a great deal depends upon the setup provided for in the application. Fortunately, we provided for a professionally

and leaves are being made and colored in their exact original shades and tints. Both animal and plant forms which cannot satisfactorily be mounted by the taxidermists, or dried by the biologists, are preserved in alcohol and other preparations, in museum jars. A wonderful collection of butterflies, moths, and bugs of all kinds have been collected and assembled for display.

In one of the open-pit iron mines of the vicinity fossils were being unearthed so we dispatched a couple of workers to assemble a collection. As a result, we have collected one of the finest displays of the kind in the state. It includes the remains of flying lizards, prehistoric sharks, palm and fig leaves, and giant snails 18 in. in diameter. Samples of rocks and minerals make up another section.

A considerable historical division is in course of development with pictures, papers, clothing, furniture, guns, etc., from the time of the early



A CORNER IN THE MUSEUM'S TAXIDERMY SHOP

trained, nonrelief person as curator, and for biologists, taxidermists, cabinetmaker, etc., including office workers. Approval came through for seventeen workers but we never filled the quota, due to a mistake that had been made in providing for too large a number under the common-labor classification whom we found it difficult to use to advantage. We have, however, filled the gap by the use of apt young people who were assigned on the NYA one-third-time program.

Collecting Specimens

At the end of four months' work, we have developed a veritable miniature Smithsonian Institution. WPA funds provided \$700 for taxidermists' supplies, glass, and lumber for museum cases, and the school district supplied four large display rooms in a modern, fireproof school building. Considerably more than one hundred species of birds from the region have been collected and mounted. This is exclusive of game birds which have not been taken to date but will be the next subject for the taxidermist's skill. By the first of the new year, we shall expect to have collected and mounted about two hundred species of birds — a laboratory to make any nature student envious. The collection of mammals is growing rapidly, and it is hoped that before the project ends, every species inhabiting the region will be represented.

An 18-lb. northern pike is the first of the finny tribe to find a place in the collection but very soon our collectors will specialize on fishes, until all the local species are represented in the collection. Reptiles of all kinds are being cast in plaster and painted in natural colors. They are often taken for living specimens, so perfectly has nature been copied. In addition to a complete herbarium of pressed flowers and plants, plaster casts of flowers

settlers to the present. Plans embrace the building of miniature reproductions of early logging scenes; farming in the early days when European methods prevailed almost exclusively; and the development of methods in the iron-mining industry. Indian handiwork is also being added to the collection, and a complementary WPA project is digging into the mound builder's culture and adding the finds to the museum. Incidentally, mounds are being restored to their original shape and form, after having been almost destroyed by careless, thoughtless, and unscientific treasure hunters over a period of sixty or eighty years.

Developing Interest in the Museum

As the size of the collection grows, the interest of the public in it also grows, and so does the number of voluntary contributions of interesting specimens of all kinds. Every day that passes increases our appreciation of its educational value. During the earliest phases of the project, when there were but a very small number of specimens, the principal correlation with the school's work was through having the curator and the senior biologist give occasional lectures to science classes, illustrating the talks with specimens from our collection. Later we brought whole class groups to the museum rooms, in charge of their teachers, and there provided them with the additional guidance of a trained scientist. When the project has been completed, we shall make the head of the high-school work in biology responsible for the direction of the museum work.

Elementary-school classes in nature study will go to the museum whenever teacher and supervisor believe that the work can be made more significant thereby. As our school buildings are all on the same campus, and not more than 150 feet apart, the trips will not interfere seriously with time schedules or with our general organization. The work will be vitalized as never before and in a

degree that could not be achieved in any other way. We anticipate that language classes and those in the social studies will find it almost equally valuable — and the work in art can be stimulated as in no other way. The nature appreciation of the school children has been increased immeasurably since they have had contact with the collection, and through the summer months an average of 25 to 30 children of the lower grades have visited the museum during the "visiting hour" each day.

Opportunities for Correlation

As the museum occupies quarters in the high-school building, it offers opportunities for correlation with the classes in biology, general science, English composition, art, and the social sciences. Groups will make use of it in very much the same way as has been outlined for the elementary grades. The future growth of the collection is expected to be a direct outgrowth of the interest of high-school students. A taxidermy club, which was the largest and most popular of the student-interest clubs, even before the museum project started, can be depended upon to fill in the gaps that may be left in the collection of birds and mammals. Science, photography, and nature-study clubs may be depended upon, under proper leadership, to make major contributions in keeping the museum a living and growing concern.

The permanent maintenance of the museum will be assumed by the school district. It will entail no additional outlay of capital. The total expense will be the items of heat, light, and janitor service — all of which would have to be provided for the rooms if used for any other school purpose. The professional services will be cared for as extracurricular duties of the science faculty, at no extra cost to the schools. Present plans are to make the museum available to the public at regular visiting hours throughout the year. When school is not in session, this service will be supervised by the building custodian or watchman, who always have been employed on a year-round basis. We anticipate that other schools for a radius of a hundred miles will frequently take advantage of the facilities by bringing class groups, by school bus, in connection with their work in nature study, biology, and the other sciences.

Setting Up a Museum Project

In recent weeks I have so often been asked how to go about the getting of a WPA museum project that I shall give a few suggestions. First, be sure that you have a satisfactory place to house a museum collection before you ask for a project, and be prepared to convince the WPA authorities that the facilities are adequate, and will be permanently provided. After that, make application to your state director of professional and women's projects for assistance in securing such a project, under the sponsorship of the school board or some other municipal agency.

Don't expect to find someone on relief who can take the responsibility of the technical direction of museum organization, so insist on one nonrelief worker. Our project was written to provide a salary of \$150 per month for this person. Many of the best museums of the country have capable young men or women associated with them who can be induced to come and "try out their wings" as a responsible museum head. I should recommend a senior and a junior biologist, one trained in the field of zoology and the other botany, a taxidermist, assistant taxidermist, a cabinetmaker and carpenter, an artist, a photographer, a stenographer, a bookkeeper or junior clerk, an ornithologist, and as many other professional classifications as you think can be successfully used in connection with the particular type of museum you have in mind. People who are naturally "apt" may be trained on the job for some of these places; but the more professionally trained classifications you can secure on the original authorization, the more satisfactory will be your ultimate results. Our original authorization provided for \$7,000 in salaries, and \$700 worth of materials, to run for a period of five months, with the understanding that if results justified it a supplement would be granted. We have asked for a supplement carrying the work on for another year, or through to July 1, 1937. All agree that we have, in the museum, the most valuable educational laboratory connected with any high school in the state.

¹Superintendent of Schools, Aurora, Minn.

The Eleven Masked Typewriters (ALL MAKES)

...AND THE Mystery of No 11



Day by day typists recruited at random operated eleven masked machines

Day by day the voting was heaviest for one of them . . . No. 11

WHAT a strange setting for a battery of typewriters! A long fabric-covered board from the face of which eleven typewriter keyboards protruded. Eleven typewriters *masked* so that even their own makers would never know them. Yet they told a group of engineers and witnesses some startling new truths about "TOUCH."

* * *

Every day new groups of typists recruited from the city's employment offices operated these machines. Each operator was asked to cast her vote favorably or otherwise after she had used each typewriter for a definite period of time. Each was asked to record her reactions to every machine in one of three ways . . . "Fine"—"Acceptable"—or

"Do not like." And day by day the vote placed Machine No. 11 in the lead by an overwhelming majority.

Machine No. 11, with a final score of 92½ points, led every other typewriter in the "Blind" Touch Test by a wide margin.

Machine No. 11 received more votes of "Fine" by almost 50% than any other standard typewriter in the Test.

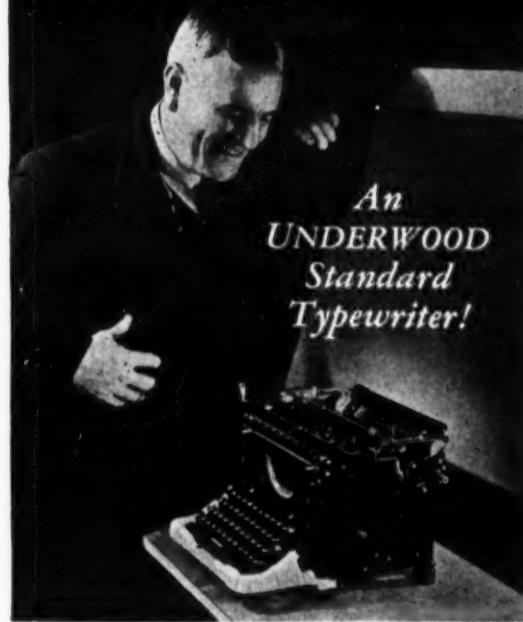
Machine No. 11 was a stock model Underwood Standard Typewriter, brought by Touch Tuning* to the peak of touch perfection, as are all Underwoods before they leave the largest typewriter plant in the world.

* * *

For perfection of touch . . . for speed, accuracy, durability, simplicity . . . select the Underwood.



No. 11
The Winner!



An
UNDERWOOD
Standard
Typewriter!

"The Machine of Champions"

*Touch Tuning means the adjustment of each key on the Underwood to the requirements of the finger that strikes it.

Every Underwood Typewriter is backed by nation-wide, company-owned service facilities.

Typewriter Division
UNDERWOOD ELLIOTT FISHER COMPANY
Typewriters . . . Accounting Machines . . . Adding Machines, Carbon Paper, Ribbons and other Supplies
One Park Avenue, New York, N. Y.
Sales and Service Everywhere



THE
NEW
UNDERWOOD
STANDARD TYPEWRITER



KING CHARLES V WERE ALIVE TODAY HE COULD HAVE REALIZED HIS PET AMBITION

Four hundred years ago Charles V ruled the great German empire, and after a long and successful reign, he retired to a monastery to rest his frazzled nerves. He amused himself by tinkering with clocks. There were a great many and his pet ambition was to regulate them all to strike at precisely the same time. But try as he would, he could not make them do it.

STANDARD ELECTRIC PROGRAM CLOCKS

START -- AND -- STOP -- YOUR -- CLASSES -- ON -- TIME

These modern program clocks have been doing for over 50 years the thing that King Charles never could do with all his patience. Controlled by an electrically operated precision built master clock, all secondary clocks tell the exact time simultaneously, and classroom bells ring ON TIME in accordance with a pre-determined schedule.

Whether you are planning new schools or remodelling, it will pay you to get all the facts on "Standard" equipment before you buy.

THE STANDARD ELECTRIC TIME COMPANY
SPRINGFIELD MASSACHUSETTS

Offices in Many Principal Cities



"Standard Makes Every Minute Count"



SCHOOL LAW AS VIEWED BY THE COURTS

Compiled by Patrick J. Smith, Supreme Court
Library, Indianapolis, Indiana

State Policy of Education

It is the public policy of the state to afford all children of school age a reasonable opportunity to obtain, at least, a common-school education. This the Supreme Court of Oregon has held in the case of *Rysdam v. School District No. 67 of Union County*, 58 Pac. (2nd) 614.

Under the Oregon Code of 1930, Section 35-1125, in order to suspend school, provision must be made: "(1) For the instruction of said pupils in another district; (2) for the payment of tuition of said pupils for the instruction; (3) to provide transportation for said pupils to said school, or pay board for said pupils, while attending school in another district. The above provisions are mandatory, and the school district cannot, by vote or otherwise, avoid the discharge of a duty plainly imposed upon it.

"It is unnecessary to pass on the legality of the suspension of the school. It was, in fact, suspended, and the school district should be estopped to claim that it was not done according to law and thereby evade the obligation imposed by statute.

"In the instant case, when the district voted to suspend school in School District No. 67, it also voted that transportation be not furnished, so that plaintiff was put on immediate notice that the district refused to furnish his children transportation to the school to which they were assigned. The plaintiff therupon discharged a moral obligation that he owed to his children which was a legal obligation owed by the school district. It is the public policy of the state to afford all children of school age a reasonable opportunity to attain, at least, a common-school education." The parent is entitled to compensation for transportation of the children.

School-Board Meetings

Where four of five board members met with the superintendent at a place where no meeting had ever before been held, at a later hour, and the fifth member received no notice, an election held at such meeting was invalid, the Kentucky Court of Appeals has ruled in the case of *Brown v. Turman*, 94 S.W. (2nd) 1010.

"We think the consistent course of action of the Boyd County Board of Education in meeting in the office of the county school superintendent established a regular meeting place as effectually as if it had been done by formal action. . . . Mr. Johnson had received no notice of a meeting of the board of education to be held in the county attorney's office at three o'clock or at the hotel at Ashland at four o'clock. When the members of the board met behind closed doors at those places, where no meeting had ever before been held, they were not holding any adjourned meeting, indefinitely agreed upon and recited in the minutes of the regular meeting held on January 1, nor a called meeting of which Johnson had actual notice.

"Counsel for appellant concede that, in the absence of legal notice to all members of a special meeting of the board, its action is invalid when any of them are absent, for the board can only bind the district by a corporation meeting held as provided by law."

Filling Vacancies on Board

In the case of *Barton et al v. Brafford et al*, the Kentucky Court of Appeals has ruled that power to fill vacancies on the board of education rest with the remaining members if they act within 90 days, if not, then with the state board of education, and appointments made by the Governor are invalid, 95 S.W. (2nd) 6.

"We must determine whether the legislature has by a general act provided for filling of vacancies in the office of the members of the boards of education of independent graded school districts, such as under review.

"Section 4399-30 Baldwin's 1934 ed., contains the expression of the Legislature concerning any vacancy in any board of education, reads: 'Any vacancy in any board of education, from whatever cause accruing, shall be filled for the unexpired term by the other members of the board within 90 days after such vacancy occurs,' . . . if not, then 'it shall be filled by the State Board of Education within 30 days after information has been filed by any citizen of the district that such vacancy has existed for more than 90 days.'

"So much of section 4399-30 as confers on 'other members of the board' the authority to fill vacancies in its membership is construed in *Douglas v. Pittman*, 39 S.W. (2nd) 979.

"Adhering to our construction of the words 'other members' as used in the statute construed in that case, vacancies in membership of the board may be

filled by 'other members,' whether one or more constitute the 'other members' at the time of filling the vacancy or vacancies, provided he or they do so 'within 90 days after such vacancy occurs.' A quorum of the members is not required by the statute. . . . It expressly conferred on the one 'legally elected and qualified member' of the board, for 90 days after the vacancy occurred, authority to fill the vacancy. Hence it deprives the Governor of the power to fill the same. . . ."

Tuition of Resident Poor

Where an impoverished family lived in a house built by the county on lots which the county owned and the children attended school in this district the county is not liable for their tuition.

The county bought two lots. A two-room building was erected. Into this a man and his family of a wife and six children moved. Four of the children attended school. At times the family was on relief.

"Plaintiff (school district) seeks to apply Code Section 5346, which provides in substance that the tuition for poor children who are cared for at the county home shall be paid by the county. It is apparent that these children are not covered by this section of the statute. They were not and never had been inmates of the county home. . . ."

"It is our conclusion that, under the undisputed record in this case, the residence of these children at the time in question was within the boundaries of the plaintiff school district. This being true, it necessarily follows that the plaintiff was not entitled to charge the county for the tuition of these children." *Carbon Independent School District No. 10 of Douglas Township, Adams County v. Adams County*, 267 N.W. 690.

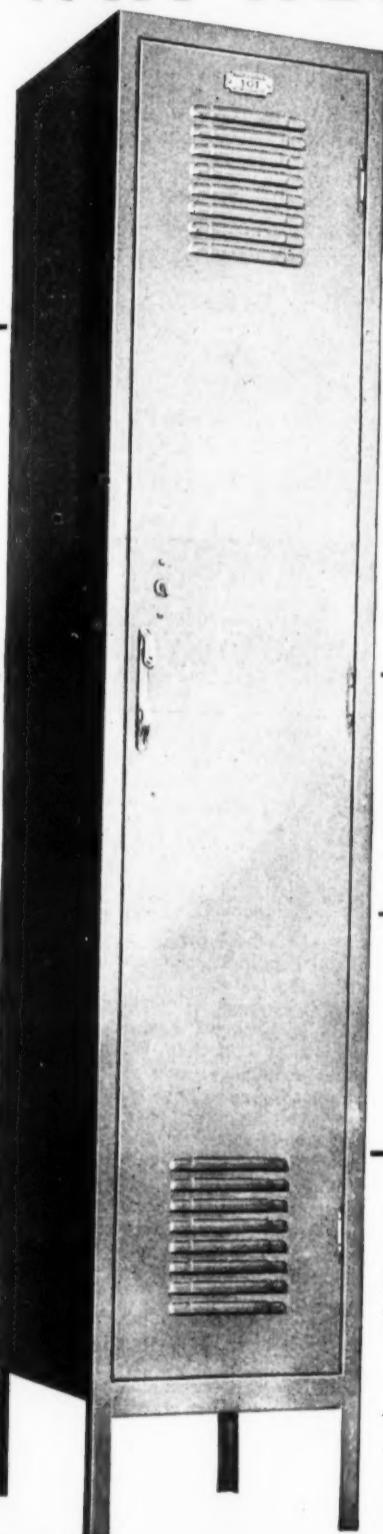
Ouster of School Directors

The ouster of school directors by a trial court when the directors violated the school code by allowing the granddaughter of one of the directors to teach without receiving a three-fourths vote in the affirmative of the members of the board, was not an abuse of discretion, the Supreme Court of Pennsylvania has said in the Appeal of Kabacinski and the Appeal of Pawloski, 185 Atl. 266.

"No express right of appeal is given school directors ousted under the School Code. This Court therefore will consider the matter as upon certiorari only and will review the record so far as may be necessary to ascertain whether the court below exceeded its jurisdiction or abused its legal discretion.

(Concluded on Page 52)

Check Up and See— WHY NEW A-S-E STEEL LOCKERS Outvalue the Field



Designed by architects and users—built by All-Steel-Equip . . . veterans in steel equipment manufacture . . . the new A-S-E Lockers offer, feature by feature, the biggest locker value that ever met the market. Some of the advantages of A-S-E Lockers are described here.

MODERNIZED DESIGN

✓ A-S-E built louvers of modern design—got increased ventilation—startling beauty. They used 16-gauge steel for permanency. A *functional* locker handle. It operates at a finger touch, closes with security—*won't* catch clothing or towels. A-S-E die cast it from white brass with tarnish-proof finish for break-proof service. Torpedo-type, streamlined hinges! Actually part of the door. So smooth that nothing can catch on them. No weakening notches in the frame. Hinge pins concealed—tamper-proof.

SLAM-PROOF, PRECISION LATCHING

✓ Quiet is the word—even when the door is slammed. Special, *renewable* live-rubber bumpers are the reason. No clanging noise. Bolt of lock goes right into latch bar. No pieces to bend or break. Handle can't be jimmied off. Locking is smooth, certain, fool-proof.

SPRING-PROOF DOORS

✓ 16-gauge steel—compound flanges along both vertical edges—A-S-E doors are tougher than the toughest user. With rigid strength and integral hinges, A-S-E doors withstand abuse-tests that wreck ordinary doors.

WORKMANSHIP AND MATERIALS FOR LIFETIME SERVICE

Best appreciated after years of hard service is the unsurpassed excellence of workmanship and materials in A-S-E Lockers. Down to the smallest detail of construction, these finest of all lockers are built for *good looks, lifetime service, bigger value*.

SEND TODAY FOR ILLUSTRATED CATALOG C-30 that tells about all the valuable features of A-S-E Lockers!

ALL-STEEL-EQUIP COMPANY

INCORPORATED

606 JOHN STREET

AURORA, ILLINOIS



NORTON COMPANY, WORCESTER, MASS.

New York Chicago Detroit Philadelphia Pittsburgh
 Hartford Cleveland Hamilton, Ont. London Paris
 Wesseling, Germany

(Concluded from Page 50)

"Appellant's whole argument to show that the court overstepped the legal bounds in ordering the ouster seems to rest on the theory that the violations of the provisions of the statute . . . were the result of mis-taken judgment on the part of the directors and not of conscious intent to violate the provisions. Our examination of the record discloses no abuse of discretion but, on the contrary, a wise exercise of it."

Permanent Tenure

Where a teacher taught but 193 days during one school year, he could not count that year toward his acquiring the status of a permanent teacher where the statute specified that teacher must teach 195 days if the year was to be counted. *Richardson v. Board of Education of Los Angeles City School Districts et al.*, 58 Pac. (2nd) 1285.

"Under its general powers to govern the schools the board had power to make rules not inconsistent with the state law of the rules of the State Board of Education.

"The relation between the teacher and the school district is one that is created by contract. . . . Plaintiff's several contracts made specific reference to the rules and regulations of the board, the employment being subject thereto. It appears, therefore, that essential terms of the employment to which the parties agreed were that 195 days of teaching service should be rendered each year, computed under the rules of the board, and that if the days of service fell below the minimum requirement the year in question would not be considered one during which plaintiff was successfully employed for a complete year.

"Plaintiff's rights are governed in all matters in which the law leaves the parties free to contract. There is no conflict between the rules of the board here involved, which were incorporated into the contract, and the state law on the subject. The provisions of the contract, therefore, are controlling. Plaintiff's services having fallen short of a complete year's service were insufficient to meet the requirements of the contract and the rules of the school district and he has failed to comply with the conditions upon which his right to a rating as a permanent teacher depends."

Permanent Tenure of Teachers

A teacher, who resigned as a condition to re-employment before three successive years as required to establish permanency, could not complain of dismissal in absence of fraud or duress in obtaining resignation.

Treads that protect against Stairway Accidents

made Permanently Non-slip by Alundum Aggregate

TERRAZZO treads are exceedingly popular for modern school buildings—and with good reason. And to add permanent safety and increased durability to their features of appearance and economy, many architects specify Alundum Aggregate. This Norton abrasive product when incorporated in the surface of terrazzo treads (monolithic or precast) in the proper proportion provides a firm, sure grip for the foot—non-slip effectiveness that is not lessened by wear.

There are many installations of Alundum Aggregate Treads that have seen years of service in places where traffic is heavy—schools, department and chain stores, railroad stations. They have demonstrated conclusively their ability to give dependable, permanent safety and exceptional durability.

T-437



Merman v. Calistoga Joint Union High School District, 55 Pac. (2) 195. February 28, 1936.

"Plaintiff was first employed by defendant district as a substitute teacher in 1928, and then as a probationary teacher from November 5, 1928, to June 30, 1931. Thereafter the resignations of plaintiff and several other teachers were requested by the board, and plaintiff presented her resignation, which was accepted. Thereafter she reapplied for a position and was elected for the school year 1931-32, and subsequently for the years 1932-33, and 1933-34. On May 4, 1934, she was discharged.

"Plaintiff claims that she became a permanent teacher with tenure, and was subject to dismissal only for misconduct, as a result of her continuous teaching from 1928 to 1934. Normally such tenure would be acquired by three years of successive employment. . . . Plaintiff, however, resigned her position before the requisite period was served. She charged that her resignation was demanded as a condition of re-employment, in pursuance of a policy of the board to circumvent the tenure law. It appears that in 1931, section 5.501 of the school code was enacted, providing that in school district with an average daily attendance of less than 850 pupils, the classification of teachers as 'permanent' after three years should be wholly optional with the trustees. Doubtless the defendants intended to avail themselves of the provisions of this statute, and to avoid any possible carrying over of permanent employees, would have dismissed plaintiff if she had not resigned. Plaintiff has not established any fraud, duress, or intent on the part of the defendants to defeat the purposes of the law; but in any event, such claims would have been more properly raised at the time her resignation was requested. The record shows she acquiesced in the request, resigned without protest, and applied for re-employment without asserting any tenure rights. Under these circumstances her resignation must be held to have terminated any prospective permanent status based upon past service."

Part-Time not Permanent Employment

A written notice of part-time employment is not sufficient to create permanent status where the teacher had taught only four other years. The Indiana Supreme Court said in the case of *Board of School Commissioners of City of Indianapolis v. State ex rel. Wolfolk*, 199 N. E. 569, February 5, 1936.

" . . . It is held generally that, where a statute prescribes a mode of exercising a power, that mode must be adopted, for there is no inherent right of dis-

cretion in corporate bodies. Persons contracting with school trustees are bound to take notice that their powers are limited by law. . . . If the statute prescribes mode in which the power shall be exercised, and the method prescribed is disregarded or not substantially followed, and a contract entered into, such contract is void."

"The Act of 1933, in defining a permanent teacher, provides that any person who has or shall serve 'under contract as a teacher' means a contract containing the terms and conditions, and executed in the manner prescribed by the statute.

"The alleged contract of the relatrix for the school year of 1927-28 does not comply with the terms of the statute. It was not in writing, signed by the parties to be charged thereby; it did not state the date of the beginning of the school term, the number of months in the school term, the total amount of the salary, and the number of payments to be made during the school year. In addition to all this, the contract upon which the relatrix relies was uncertain as to the time she was to teach in that school year and the amount she was to receive for the year. She did not know when she would be called upon to teach or whether she would be called in any event. At most, she was an extra, part-time, or supply teacher. She was not in a position to demand of the school board that she be permitted to teach on any certain day, week, or month of the year; nor was she bound to report for teaching when called upon by the school board. Under these conditions, it cannot be said that she taught under a contract prescribed by statute or that she is a permanent teacher, since it was necessary, in order to become such, to show that she served under a contract prescribed by statute. Without this showing she was unable to show that she had been a teacher in the school corporation for five or more successive years, and that she was thereafter employed for further services. . . ."

The report, in pointing out undesirable conditions, showed that large numbers of schools are inadequate for school purposes, due to the fact that they are unsuited because of their temporary character, serious hygienic defects, or inability to properly house large classes. While the report called attention to the existing serious conditions, it failed to offer a definite solution to the problem.

• The school board of Wakefield, Mich., has elected Mr. RUSSELL WORTLEY as a member, to succeed John R. Matthews. Mr. W. O. MACKEE was elected treasurer of the board.

ACCOTILE FLOORS IN THE BASEMENT ADD EXTRA ROOMS TO THE SCHOOL



Floor of this Visual Education Room in the Huntington Beach School, Huntington Beach, California, is Armstrong's Accotile, Travertine Marble No. 240. Floors in the corridors, classrooms, and auditorium are Armstrong's Jaspé Linoleum No. 12. Architects: Allison & Allison, Los Angeles.

WASTE space in school basements can now be transformed into comfortable, cheerful rooms. The proof is above. Here you see how an inexpensive floor of Armstrong's Accotile has made possible a pleasant Visual Education Room in the Huntington Beach Elementary School, Huntington Beach, California.

Basement floors in your own school can be made dry and warm—healthy for children—with Armstrong's Accotile. Accotile is moisture-resistant. It

can be laid directly over concrete floors in contact with the ground. Its rich swirl marbling hides unsightly traffic marks. Its bright, cheerful, plain and marble colors make any room a pleasanter place for work, study, or recreation. It is sanitary, safe, and fire-resistant.

Add to these features its other advantages—durability, low cost, and easy maintenance—and you'll readily understand why so many schools are using Accotile Floors for basement rooms, offices, and corridors.

In addition to Accotile, Armstrong also offers the only complete line of other resilient floors for schools—Linotile, Rubber Tile, Cork Tile, and Linoleum—from which you can select the exact floor to meet any specific need or any budget requirement.

For complete information and a color-illustrated "Armstrong's Tile Portfolio," write today to Armstrong Cork Products Co., Building Materials Division, 1212 State St., Lancaster, Pennsylvania.



ARMSTRONG'S *Linoleum* and RESILIENT TILE FLOORS

LINOTILE • ACCOTILE • CORK TILE • RUBBER TILE • LINOWALL • ACOUSTICAL CEILINGS



PROGRESSIVE even to MAPS and GLOBES

It is typical of America's finest schools, that in every detail of school administration modernness and progressiveness is the keynote.

In the matter of MAPS and GLOBES, educators realize that these, too, are teaching tools which must be abreast of the times, if educational objectives are to be attained.

It is significant that in schools where progressive teaching methods are the rule, there you will usually find Weber Costello Map and Globe equipment.

If you have not yet become acquainted with the W. C. Semi-Contour Political-Physical Maps and the W. C. Political-Physical Duo-Graphic Globe, we suggest you let us tell you about these two modern aids to successful Geography Teaching.

Write for "Aids for The Geography Teacher."

Address Dept. MG92

WEBER COSTELLO CO.
PUBLISHERS - - - - - CHICAGO HEIGHTS, ILL.

How Does the Remotest Earthquake Write Its Story With This Little Needle?

THIS diagram of the **seismograph**, fully described in the New Merriam-Webster, explains how earthquakes are recorded. Hundreds of other illustrations and articles describe many kinds of scientific measuring instruments.

You will find complete information on thousands of subjects in the new Merriam-Webster. 600,000 entries—122,000 more than in any other dictionary. Edited by 207 outstanding authorities.

The Supreme Authority—A New Creation

WEBSTER'S NEW INTERNATIONAL DICTIONARY - Second Edition



3,350 pages • 12,000 terms illustrated • Over 13,000 biographical entries • Thousands of encyclopedic articles • 35,000 geographical entries • Synonyms and antonyms. Write for free, illustrated pamphlet containing specimen pages, color plates, and full information.

G. & C. MERRIAM CO.

Springfield

Massachusetts

Teach PRINTING and you teach



applied English
applied Art . . .
applied History
Geography . . .

For the most comprehensive coordination of all academic study, provide printing instruction for your students.

A Printing Department will demonstrate the practical application of many subjects that otherwise remain theoretical. It will foster clear and orderly thinking, and inculcate desirable habits.

A staff of experts at American Type Founders devote their entire effort to the development of printing curriculum for schools. Their services are available without cost or obligation. Write.

DEPARTMENT OF EDUCATION

AMERICAN TYPE FOUNDERS

ELIZABETH • NEW JERSEY

This is but one of twelve reasons why you, too, should teach printing. Write for the other eleven reasons

Types used: Century Schoolbook and Italic, Bernhard Gothic, Tower and Romany

LOWER PRICES!!

Lennes Test and Practice Sheets in Arithmetic at Lower Prices

Owing to the tremendous sales that we have already had on the *LENNES Test and Practice Sheets in Arithmetic*, through which all editorial and preparation costs have been written off, we have now reduced the prices of the full year *Lennes Pads* from a \$0.30 to a \$0.20 list price. We are thus passing along to the schools an important saving.

You will undoubtedly wish to include the *Lennes Pads* in your requirements for the next school year.

LIST PRICES

Pad 1, each	\$0.16
Pads 2 to 8, each . . . . .	.20

(Subject to usual quantity discounts)

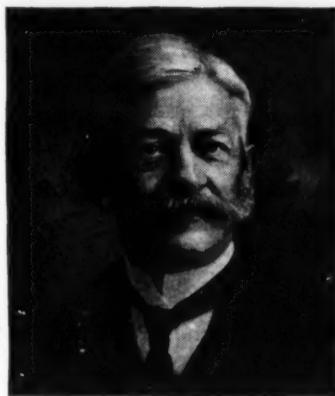
JUST PUBLISHED

Ask for information about **ESSENTIALS OF
EVERYDAY ENGLISH** for Grade Two. List
Price \$0.32.

Laidlaw Brothers

Chicago

New York



UNSEEN STRENGTH—VIGOR

and WEAR RESISTANCE are literally poured into the materials used
in HOLDEN BOOK COVERS

By strengthening the bindings of books with Holden
Covers you can double their lives and service — be-
sides promoting Healthful conditions in the schoolroom.

ORDER NOW Enough Holden Covers to protect
all new books and those in good condition.

HOLDEN PATENT BOOK COVER COMPANY

Miles C. Holden, President

SPRINGFIELD, MASSACHUSETTS

Professional Growth of Teachers in Coraopolis

J. C. Werner, Supervising Principal

Pennsylvania is making rapid strides in the field of teacher training. Information recently released by the State Department of Public Instruction shows that in 1920 only 7 per cent of all teachers employed in the public schools of the state had completed four years of college training. During the school year which closed July 1, 1936, 38 per cent of the total number employed had completed four years of college training. In the third-class districts of the state the number of teachers with four years of college training was 44 per cent of the number employed by such districts. Tentative certification standards which will ultimately require four years of training for admission to the teaching profession indicate that this increase will continue.

With state-wide conditions as a background for comparison, it is interesting for any district to compare the training of its staff with conditions throughout the state. Coraopolis teachers have been carrying professional study over a period of years. In "Professional Study During the Depression"¹ a summary of such study was presented. The following table is a comparison over a period of years:

	1920-21	1925-26	1930-31	1935-36
Doctor's degree	—	—	—	1
Master's degree	—	2	5	9
Bachelor's degree	9	14	25	33
Two years of college	3	4	14	7
Normal-school diploma	22	33	36	25
Less than two years of college	11	9	2	3
Total	45	62	82	78

From the table a number of comparisons are possible. In 1920-1921, 9 or 20 per cent of the teachers employed held bachelor's degrees as compared to 7 per cent for the state. Five years later the number having bachelor's degrees was 16 or 25.8 per cent. In 1930-1931, 30 members of the staff or 36.6 per cent of the total number held bachelor's degrees. During the past year 43 members of the staff held bachelor's degrees. This number constituted 55.1 per cent of the total number employed. It should also be noted that 10, or 11.5 per cent, of the staff during 1935-1936 held graduate degrees.

¹Pennsylvania School Journal, June, 1934, p. 533.

The figures released by the Pennsylvania State Department of Public Instruction and the comparisons for a 15-year period in Coraopolis indicate quite clearly the definite trend toward a teaching personnel which will have a minimum requirement for certification of four years of post-high-school training. Such a condition should give greater efficiency in the classroom and should help to raise the educational standards in the state. It also gives assurance of the realization of one of the important phases of Pennsylvania's program in recent years.

With the realization of this part of the state program new problems present themselves. When the Edmonds Act was adopted, two years of post-high-school training was the goal sought for in the training of teachers for the elementary schools. Are the provisions of this act, insofar as salaries are concerned, sufficient to maintain the standard of four years of post-high-school training? Will the gradual approach of a staff with four years of training result in the adoption of a single-salary scale which will give equal remuneration for equal training regardless of the position held? If the single-salary schedule is adopted, what will be its effect upon salaries in high school? Will predepression maximums be maintained? Will the various districts be able to meet this additional financial burden? To what extent should the state aid the various districts in meeting the financial burdens which may result from the higher standards of training?

Thus it would seem that as the problem of having an adequately trained teaching staff is approaching solution, such solution is bringing with it new problems for educational leaders to solve. While these problems are likely to be in the field of finance, most educational problems are ultimately problems of finance.

A STAGGERED PROMOTION PLAN

Under the staggered annual promotion plan, now in operation in the Copiague Union School, in Copiague, New York, two separate groups of classes are conducted regularly from the first through the eighth grades. In one group, a class begins the work of each of the eight years in September; in the other group a class begins the second half of the work of each of the eight years in September, finishes the

year in January, and completes one half of the work of the succeeding year the following June.

Under the program, promotions are made annually. The B sections of the grades in September are promoted in June of each year, to the beginning section of the succeeding year. The A sections of the grades in September are promoted in January of each year, to the beginning section of the succeeding year. The grades promoted in June are easily distinguished from those promoted in January. All are designated by the work that they cover in the school year September to June. An XB-XA grade with X being any year from one to eight, begins the work of the year in September, and completes it and is promoted to the succeeding year in June. An XA-YB grade, being the year next succeeding X, completes the work of the X year in January, and is promoted to the succeeding year at this time. Half of the school is promoted in January, and the other half in June.

All of the grades remain with the same teachers for a full year; the B-A sections from September to June, and the A-B sections from January to January. This plan offers the advantages of the semiannual promotion plan without some of its disadvantages. It permits half-year adjustments without incurring the losses due to frequent promotions.

THE LARGEST CITY SCHOOL SYSTEM

When one contemplates the school system of New York City he will at once be lifted into fabulous figures and wonder how a gigantic piece of machinery here involved can run smoothly and efficiently.

The annual financial and statistical report of the board of education of New York City not only constitutes a ponderous volume but contains a wealth of information on how a great school system is controlled and managed.

The figures employed in the financial statement run into many millions. The disbursements, for instance, for the year 1935, amounted to \$167,656,974.98. The largest item in the budget is the cost of instruction; namely, \$116,674,509.50. The physical maintenance of the plant ran up to \$3,231,235.67, while the physical operation of the plant amounted to \$7,176,092.75. The administrative costs—educational, business, and general—aggregated the sum of \$3,914,121.75. The total capital outlay for the year amounted to \$6,363,364.17.

The accumulated investment in school property at the end of 1935 amounted to \$488,178,967.93. The total number of school buildings is 1,005; number of classrooms 24,572; and total number of school sittings 1,155,056.

School Administration in Action

Status Teacher-Rating in 1936

Harry L. Senger¹

In the nineteenth century it was easy to determine the value of teaching and the efficiency of the teacher. Objectives were blunt and unrefined; examinations were held in high regard. The purpose of a course in arithmetic or Latin was to have the pupil learn arithmetic or Latin; the effectiveness of such teaching was readily gauged by the amount of such learning displayed in an examination paper.

Since that simple period the objectives of teaching have become so elaborated that this procedure is no longer applicable. Though it may sound queer, objectives have become highly subjective. As a result, there have come into prevalent use methods of measuring the efficiency of teaching which are charged with the mental indirections of the measurer; namely, the rating of teachers.

Responses to a questionnaire issued by the salary committee of the Cincinnati Teachers' Association in February, 1936, indicate that rating schemes are in common use throughout the country in cities of 100,000 population or over. Sixty out of the eighty superintendents replying to the committee declared that they employed a rating system for teachers. Printed forms accompanied many of the responses. The forms varied from small cards with two or three ratings to large booklets containing hundreds of items. Equal diversity is evident in the methods of rating — self-rating by teachers themselves, rating by the principal, by the superintendent, and again by a force of special supervisors. The procedures do not easily lend themselves to classification.

Obviously, rating, in itself, has no significance; it acquires importance only insofar as something is done about it. There is no way of ascertaining from a questionnaire whether rating is done in a purposeful or perfunctory manner. Ratings may be put to quite a number of uses, but it does not follow that, in a particular school system all or many or any of these uses are sought.

The commission of experts which, in 1935, under the direction of the U.S. Office of Education, conducted a survey of the Cincinnati public schools, recommended that a rating system be established in Cincinnati, basing their recommendations on the results of a questionnaire issued by the National Education Association in 1930-31. After pointing out that 64 out of the 84 cities replying (76.2 per cent) to the Office of Education had "a definite plan of rating the services of teachers," the commission advised that merit as determined by rating be made, in part, the basis of salary rewards. This recommendation naturally suggested the inference that rating for salary purposes is prevalent in other cities.

Doubting the soundness of such an inference the Salary Committee of the Teachers' Association issued its questionnaire so that the Cincinnati Board of Education might have facts instead of mere assumption to guide its deliberation upon this matter. The questionnaire was sent to superintendents of cities with a population of 100,000. Eighty replied — a response almost as large as that made in the N.E.A. study five years previously. To the question, "Is rating used to determine salaries?" 17 answered "Yes"; 52, "No"; 8 made a modified response indicating a partial use of rating for salary purposes. Clearly, rating is not used predominantly in large cities as a determinant of salaries.

Although Question 3 was the chief purpose of the document, the replies brought in other significant facts as to the prevalence of certain rating procedures and the retirement of teachers — a matter in which the teachers' association is much interested at this time.

Detailed results of the questionnaire are as follows:

¹Assistant Principal, Walnut Hills High School, Cincinnati, Ohio.

	Yes	No	Modified Response	No Response
1. Have you a rating system for teachers?	60	19	1	..
2. Have you a rating system for principals and other executives?	26	49	..	5
3. Is rating used in determining salaries?	17	52	8	3
4. Is your rating based upon —				
a) Professional Preparation?	25	11	..	44
b) Years of Service?	17	14	..	49
c) Teaching efficiency as determined by special officials?	55	2	..	23
5. Do you follow, in rating, a careful and exact procedure?	44	10	..	26
6. How many measures of teaching efficiency are attempted in your rating?				
(See below)				
7. How many distinct merit groups are recognized in your salary schedule?				
(See below)				
8. Do you rate teachers annually?	46	12	..	22
9. Does a rating cover a period longer than one year?	12	40	..	28
10. If your rating follows a definite procedure entrusted to special officials, does the rating cover				
a) Instructional ability?	49	2	..	29
b) Classroom management?	49	2	..	29
c) Professional attitudes?	49	2	..	29
d) Personal habits?	44	7	..	29
e) Discipline?	48	2	..	30
f) Teacher-pupil relationships?	49	2	..	29
g) Personal appearance?	45	5	..	30
h) Co-operation?	47	3	..	30
i) Health?	43	6	..	31
j) Emotional qualities	42	7	..	31
k) Participation in community activities?	34	14	..	32
11. Have you a supersalary for extraordinary merit in teaching as determined by ratings?	8	40	7	25
12. How long a probationary period precedes appointment with indefinite tenure?				
(See below)				
13. What is the age of compulsory retirement for teachers?				
(See below)				
14. What is the age of compulsory retirement for executives?				
(See below)				
15. Do you employ a printed form in rating your teachers?	51	5	..	24

Number of Measures of Teaching Efficiency Reported

Replies to Question 6

Baltimore, Md.	5	Paterson, N. J.	2
Dallas, Tex.	5	Pittsburgh, Pa.	58
Denver, Colo.	2-3	St. Louis, Mo.	6
Detroit, Mich.	7	St. Paul, Minn.	6
Erie, Pa.	5	San Diego, Calif.	10
Fall River, Mass.	5	San Francisco, Calif.	5
Flint, Mich.	15	Seattle, Wash.	4-8
Jacksonville, Fla.	2	Springfield, Mass.	9
Jersey City, N. J.	5	Tacoma, Wash.	6
Kansas City, Mo.	9	Tampa, Fla.	13
Louisville, Ky.	5	Trenton, N. J.	5
Newark, N. J.	5		

16 referred to document attached.

Number of Merit Groups in Salary Schedule

Replies to Question 7

Chicago, Ill.	2	Paterson, N. J.	3
Denver, Colo.	1	Pittsburgh, Pa.	1
Detroit, Mich.	3	Rochester, N. Y.	4
Fall River, Mass.	2	San Diego, Calif.	1
Gary, Ind.	3	South Bend, Ind.	2
Kansas City, Mo.	3	Spokane, Wash.	5
Knoxville, Tenn.	4	Tacoma, Wash.	5
Louisville, Ky.	4	Tulsa, Okla.	1
Oakland, Calif.	2		

33 did not answer question.

Length of Probationary Period Before Permanent Employment

Answers to Question 12

33 Cities reported	3 years.	3 Cities reported	5 years.
1 City reported	1-2 years.	1 City reported	7 years.
1 City reported	4 years.	1 City reported	2-3 years.
5 Cities reported	2 years.	1 City reported	150 days.
7 Cities reported	1 year.		

Age of Compulsory Retirement of Teachers

Answers to Question 13

32 Cities reported	70 years.	2 Cities reported	62 years.
7 Cities reported	65 years.	1 City reported	60 years.

Age of Retirement for Executives

Answers to Question 14

32 Cities reported	70 years.
7 Cities reported	65 years.
1 City reported	60 years.

SCHOOL IMPROVEMENT IN WEST VIRGINIA THROUGH THE COUNTY-UNIT PLAN

Superintendent Fred L. Teal, of Kanawha County Discusses Advantages

The county-unit organization of schools effected in West Virginia since 1933, has resulted in enormous improvement of the rural schools and in wide economies, according to Supt. John L. Teal, of Kanawha County (Charleston County seat). Speaking before the Ohio State University Superintendents' Summer Conference, in July, Mr. Teal pointed out that, while the county-unit law was passed as a control measure and as a solution of depression problems, it has proven a long step forward over local district control.

Prior to 1933, the school system in West Virginia was composed of 398 magisterial and independent districts, the former being regulated by the state legislatures and the rules and regulations of the State Board of Education. The latter, independent districts, were governed by their own charters which had been set up through legislative acts. These independent districts were truly independent so far as state control was concerned.

In 1930-31, more than 97 per cent of the school costs of the state were being met by the direct property tax. During this time also, the state was carrying less than 3 per cent of the school expenditures. It was evident that the state had to assume a much larger share of the costs if the school doors were to remain open, and if educational opportunity was to be continued to the youth of the entire state. Indirect taxation and increased state support were the result.

Prior to the enactment of the county-unit law, education in West Virginia had cost about \$26,000,000 for an eight months' term. Only the independent districts offered nine months' terms. During 1935-36, the education costs were only \$21,000,000 even though there was an increase in total enrollment and all the school terms had been lengthened to nine months.

This reduction was brought about by the reorganization and by general economic conditions. Above all, the county-wide plan of control has offered a more equal educational opportunity to all of the children.

Disadvantages of County Units

Mr. Teal, in pointing out the drawbacks of county-wide school systems, called attention to three problems:

"1. Where districts are combined which have offered different levels of educational opportunity, great care must be taken in the building-up process. This will depend almost wholly on the financial background and the school administrator. We think that prior to the enactment of the county-unit school law, West Virginia had some outstandingly good school systems. Since the enactment and within my own experience, we feel that the damage within these better school systems, if any other than caused by economic conditions, has been *confusion* rather than *curtailment*. There may be some loss in city unity but there is also a great gain in county consciousness. With a careful administration of school programs this will right itself readily if it has not already done so.

"2. School laws are not always favorable to good school practices. The law at present places much detail on the superintendent which ordinarily is not placed there. For example, the superintendent is ex-officio secretary of the board of education and because of this spends much time at signing contracts, checks, and other detail work which to good advantage might be spent on other school problems. The superintendent's contract is also limited to just one year which does not permit of long-time planning.

"3. The county unit is too often looked upon as highly susceptible to politics. How many have not heard the same stock criticism elsewhere?" It is Mr. Teal's conviction that there is less political activity in the schools of Kanawha County now than there was under small district control. He holds that if all school elections were made separate, nonpartisan, special school elections, this danger would be removed.

A Single County's Experience

In explaining the advantages of the county-unit law to the county over which he presides, Mr. Teal showed that in 1932-33, a total of 1,372 teachers were employed in the Kanawha County schools, while in 1935-36, under the new law only 1,357 teachers were needed. This reduction of 15 teachers was possible in spite of the fact that in 1935-36, the enrollment was 43,020, or a net increase of 3,798 children. Expenditures during the latter year were \$2,232,198, or an increase of only \$3,780.

From the educational standpoint, the following advantages have resulted through the one large school district:

1. Administration of a uniform, county-wide elementary course of study has been made possible.
2. A uniform, county-wide child-accounting system has been organized.
3. County-wide administration has been developed of Detroit first-grade test and other educational tests.

(Concluded on Page 58)

In IRELAND



Perhaps some one of these may become a Moore or Goldsmith, a Parnell, a Shaw—or even a chief of police in Chicago or New York.

Royal
"THE FINEST SINCE '97"
With for catalog of
MODERN SCHOOL SEATING
for
MODERN AMERICAN SCHOOLS



No. 260 Steel Movable Desk combines the advantages of separate desks and chairs with those of movable seating. Fully adjustable, comfortable and dependable!

PEABODY School Furniture has been the choice of hundreds of school authorities for more than 34 years. This outstanding reputation is the result of tireless efforts on the part of the Peabody Engineers to build ONLY the BEST. Modern improvements of most ingenious nature have been incorporated into present-day creations of PEABODY. You may be sure of getting the latest... the newest... and the finest when you equip your schools with Peabody Seating Furniture.

"TIGHT" SPECIFICATIONS ARE NOT NECESSARY TO INSURE THE BEST - JUST SAY - "PEABODY OR EQUAL"

(Concluded from Page 56)

4. A guidance program, starting in the first grade in each school, is in effect. Says Mr. Teal: "It is our experience at the present time that there is a surplus of manpower in this country for the ordinary work to be done, but it is also our experience that skilled labor is not so easy to find. Too many pupils are regimented through school courses, without a sufficient realization of their abilities and aptitudes, and their limitations for the various fields of productive enterprise. We hold that child guidance should be understood by every teacher and principal from the first grade up; that a record of the child's particular strength should be passed along from teacher to teacher; and that an attempt should be made that education may become more purposeful."

5. Uniform courses of study have been required in academic subjects in junior and senior high schools.

6. Uniform horizontal supervision is in operation with six assistant superintendents, all working in different school levels under a county-wide plan.

7. A complete health service is at work, including doctors, nurses, dentists, and dental hygienists.

8. A sanitorium school is available for tubercular pupils.

9. A speech-defect teacher handles children with speech defects.

10. Five traveling teachers for special subjects are employed.

11. Practice, teaching and observation classes for the county college as a county teacher-training project.

12. A transportation system, including 58 school busses, serves 10,000 children daily.

13. A central financing and accounting department is in operation.

14. A maintenance department (including WPA projects) repairs the school plant.

In addition to the area served by the school busses transporting children to schools offering richer programs, Kanawha County has 125 remote school centers. In these centers, an attempt is made to rebuild school programs more serviceable to the homes there. This includes benchwork for boys, and weaving, sewing, and basketry for girls; the work is included in the fourth, fifth, and sixth grades. Many families which had previously left for the city, where they found the depression cruel, have slowly returned during these recent years. It is a prediction that the next ten years will see more of this, for the old land at the source of the stream or the valley between the hills has been more kind, and the neighbors more generous with their substance in times of stress and need.

the LATEST IN MODERN CLASSROOM and AUDITORIUM SEATING...

Strength, Durability and Comfort are outstanding characteristics of Peabody Auditorium Chairs. Available in the modern designs, colors and materials to harmonize perfectly with any interior. Illustrated is No. 850 Chair with plywood back and box spring seat.



**PEABODY
SEATING COMPANY**
NORTH MANCHESTER • INDIANA

Send today for complete catalogue showing the country's finest array of Schoolroom and Auditorium Seats.

Working Policies for the Administration of a Small High School

A set of desirable practices governing the working relationships which should exist between the school board, the principal of a small high school, the teachers, the custodians, and other agencies in a school system has recently been worked out by Mr. W. W. Crow, principal of the Tracy Union High School at Tracy, Calif. The statement reflects the principles underlying the rules and regulations in force at Tracy. The sections of the statement which have general application to small high schools read as follows:

I. Board and Principal

a) The board of education is a legislative body, and the principal has the complete function of administration.

b) The board decides upon major purposes and plans, but the principal helps to formulate and evaluate such purposes and plans.

c) The board approves, alters, or vetoes the action or decisions of its principal, but it leaves him free to perform the acts or reach decisions by his own methods.

d) The board does not expect the principal to make its decisions; however, it expects him to prepare budget estimates, to formulate courses of study, to prepare the school calendar, to select and nominate employees for the school, to nominate employees for dismissal if need is shown. The board reserves the right to set aside all proposals on these matters if it does not approve them.

e) The board's decision of disciplinary cases will be final when presented by the principal. All cases of discipline must pass through the principal's office before any board action is taken.

f) The board recognizes the rights of each of its members. The minority is always given full consideration that the interests of the parents, the taxpayers, and the children be not sacrificed in order to exercise some personal like or dislike, whether minority or majority.

g) The principal will make regular reports to the board on all school affairs. Such reports shall include at times:

1. Fire-drill reports.
2. Report on employee work jobs.
3. Individual department reports.
4. Presentation of copies of letters of authorized business.
5. Reports on condition of the building and equipment.
6. Insurance reports.
7. Recommend financial policies.
8. Recommend equipment and property policies.
9. Presentation of needed equipment with essential data.
10. Presentation of letters addressed to the board.
11. Presentation of resolutions for board action.
12. Presentation of bills for approval.
13. Presentation of minutes of teachers' meetings.
14. Presentation of curriculum for adoption (annually).
15. Presentation of budget for adoption (annually).
16. Presentation of school calendar (annually).
17. Report on transportation.
18. Report on meetings attended which would be of interest to the board.
19. Attendance and drops should be reported from time to time.
20. Reports should be given on general school progress.
21. Financial report of district money on hand (monthly).
22. Budget report once each three months.
23. Student-body financial report once each three months.

h) As a general rule, there are no standing committees of the board. Too frequently such committees take action that should be decided by the board as a whole. A committee appointed for a special duty is dismissed when that task has been completed.

i) The board expects the principal to not only work with them in determining building needs but he must initiate in planning for those needs.

j) The board holds the principal responsible for the care of the school plant, the furniture, the instructional equipment, and for maintaining the best

(Concluded on Page 60)

Modern is the word for this School... Sealex is the word for its Floors and Walls

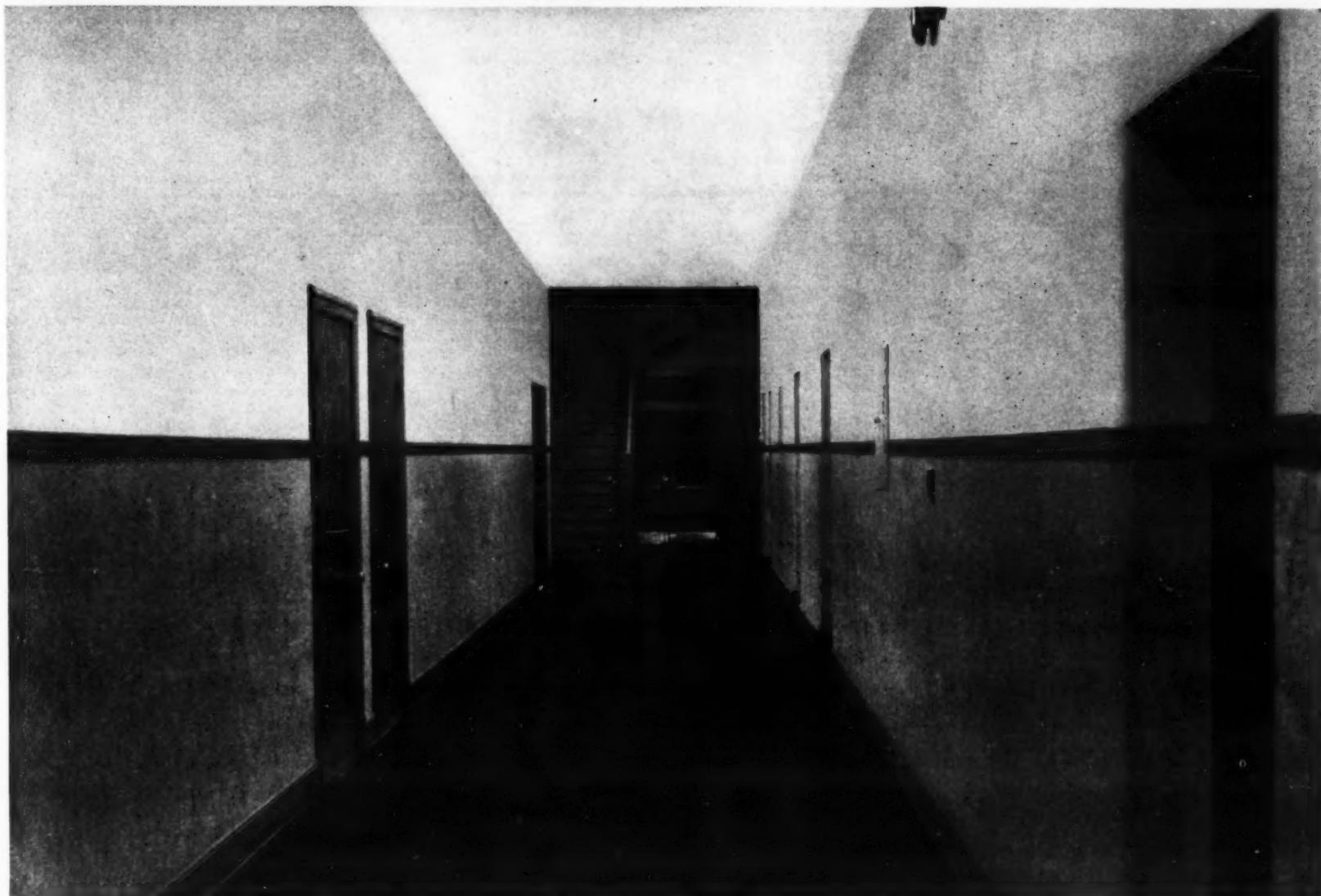


Knowing the requirements of modern school buildings, architect R. E. Sluyter of Herkimer, N. Y., specified Sealex Linoleum and Sealex Wall-Covering for the Broadalbin Central School.

What are these requirements, which Sealex materials meet so fully? *Freedom from noise*—Sealex Linoleum is quiet underfoot—actually muffles the clatter of footsteps. A perfectly smooth, sanitary surface—Sealex Floors and Walls have no indentations or cracks to harbor dirt. Make cleaning an easy, inexpensive operation. *Economy*—built to withstand the heaviest of foot-traffic, Sealex Linoleum gives satisfactory service for years, and it never needs refinishing. And, for the school-room walls, Sealex Wall-Covering provides a permanent decoration.

Installed by authorized contractors, Sealex materials carry a guaranty bond covering the full value of workmanship and materials. Write for complete information.

CONGOLEUM-NAIRN INC., KEARNY, N. J.



Quiet, long-wearing Sealex Linoleum in corridor of Broadalbin Central School, Broadalbin, N. Y. The walls—Sealex Wall-Covering to Wainscot Height. Architect R. E. Sluyter, enthusiastic over this installation, has also specified Sealex Floors and Walls in the new Poland School, Poland, N. Y.

SEALEX Linoleum Floors and Wall-Coverings

TRADEMARK REGISTERED

“Pedagogically Right”

That’s Why It Pays to Insist On

“Kewaunee”

LABORATORY FURNITURE

If your school plans to modernize laboratories, vocational or home economics class rooms, now’s the time to consult Kewaunee. Kewaunee Engineers will gladly aid you in selecting proper furniture.

When you select Kewaunee Furniture you can be sure every piece will be pedagogically right, designed to save floor space, promote efficiency, and to give many years of hard daily service. Backed by 28 years’ experience, Kewaunee is able to offer value not expressed in price, plus quality that cannot be covered by specifications.



Sewing Room, Bolton High School, Alexandria, La.

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

C. G. Campbell, Pres. and Gen. Mgr.
101 Lincoln St., Kewaunee, Wis.

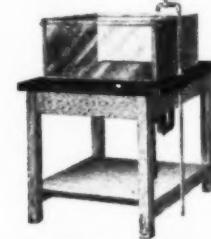
Eastern Branch: Mid-West Office:
220 E. 42nd St., New York, N. Y. 1614 Monroe St., Evanston, Ill.
Representatives in Principal Cities



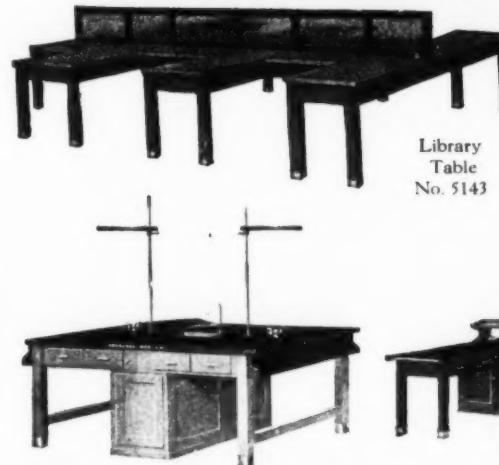
Manual Training Bench No. N-3088



Drawing Table No. B1-94



Aquarium No. C-415



Library Table No. 5143



Instructor's Table No. F-1100



Combination Science Table No. D-601



Lincoln Science Desk No. D-503

(Concluded from Page 58)

working conditions. All caretakers and janitors are responsible to the principal.

a) The adoption of textbooks and courses of study are on the recommendation of the principal.

b) The principal is invited and expected to attend all meetings of the board but is to leave the room when requested by the board.

c) The board will ordinarily not take action on criticism by parents who are displeased with the treatment of their children at school until these complainants have first conferred with the principal. The board requests all complaints in writing, dated, and signed by the complainant.

d) The board will receive complaints from students, custodians, teachers, and employees only when written, dated, and signed.

e) It will be the policy of the board that when news or publicity is available or required that the board will authorize some member or the principal to contact the local press first.

II. Teachers, Custodians, and the Principal

a) The board expects the principal to nominate employees for dismissal and to show the need of such action.

1. Such need must have been discussed with the nominee at least once during the school year.

2. Board and principal action shall not be affected by past friendships with the family, the nominee, or friends.

3. Student reaction toward an employee and public opinion toward an employee should be recognized but discounted to some degree.

b) The principal will assign all work and shall make a study of work load and time schedules.

c) The principal will give final reactions on student discipline when presented by a teacher or custodian. Board action may be taken.

d) The principal will nominate for the employment of all employees of the school. The board has the legal right to employ them. The board will not hesitate to refuse to elect a nominee if it is obvious that there are better qualified candidates for the position. In such cases the board will ask for other nominations.

e) The principal will be the official spokesman of the instructional staff, other employees, and the pupils. Board members will discourage pupils, teachers, and employees from consulting individual members of the board when the matter could very easily be settled by the principal.

f) No certified female shall marry and remain under school employment after January 1, 1936, except

those now employed. No married female will be nominated for a teaching position.

g) In the employment of “home-town” teachers, the educational interests of the pupils are paramount, and the board is not merely providing employment for those seeking positions. “Home-town” teachers should be limited; however, all qualified teachers should not be eliminated from consideration.

h) Solicitors and insurance agents will not be permitted to bother employees during school time during the hours of 8:30 to 4:00.

i) No employees of the school may be absent from work without reasonably early notification to the principal.

j) The board will adhere to policies regarding problems affecting school employees.

k) All labor employed by the day or hour must be checked in and out in the presence of some employee of the school.

Additional sections of Mr. Crow’s statement define the limitations of teachers’ pay during periods of necessary absence, the conditions of use of the school auditorium and gymnasium, and of school equipment.

THE STORY OF THE KANSAS JANITOR-ENGINEER SCHOOLS

The Kansas janitor-engineer schools, begun in 1927, have proven a gratifying success. Some seventeen schools, with an enrollment of 888 janitors of schools, theaters, post offices, and churches have held one-week terms. In these schools, 287 men have completed the two courses in housekeeping, and 101 have received heating and ventilating certificates for completing short courses in practice heating and ventilation. The enrollments during the ten years have been 1,869, which indicate that the great majority of the students have taken the two courses in housekeeping and the one course in heating and ventilation.

The active leader of the Kansas janitorial schools has been Laurence Parker, assistant state supervisor of trade and industrial education. In a foreword to a recent report, he says: “As we go about the state, we meet former students dressed in the neat uniform adopted in 1930. Our students are wide-awake, alert men, busily studying their problems and watching for chances to cut costs. They realize that every dollar saved on building care and maintenance means another dollar for the education of boys and girls.” The movement has also had the active support of the Kansas State Janitor-Engineer Association.

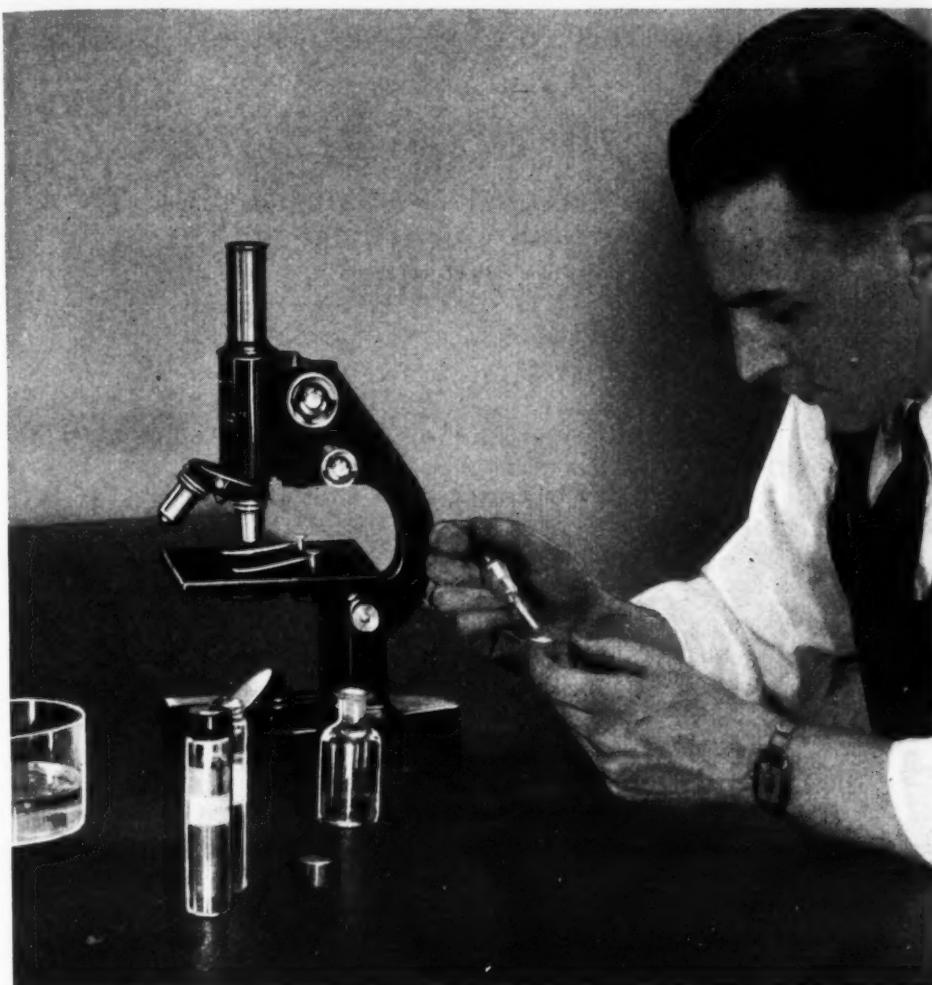
The schools for 1936 were held in Wichita, during the week of June 1 to 5, and in Topeka, from June 8 to 13. At the former five-day session, 170 janitors and engineers (including six women) from 70 cities in Kansas, Oklahoma, and Missouri, were enrolled. At the second session, 124 janitors from 37 points in Kansas and Missouri were in attendance. The work of the schools was divided into four general classifications: housekeeping and management; heating and ventilation; fire prevention and fire fighting; first-aid instruction. The daily program included lectures on the duties of custodians of buildings in their general aspects, delivered by superintendents of schools. But the courses emphasized mainly the practical branches of the janitorial service. The subjects were presented by specialists and covered such important matters as mops and mopping; cleaning terrazzo floors; repair of locks; using soaps and soap powders; refinishing school furniture; demonstrating ventilation control; burning of gas; keeping the power plant clean; systematic checking of repairs; repair of electrical fixtures and appliances; blackboard and eraser cleaning; dusters and dusting; cleaning windows; use of electric motors; theory of steam and water heating; qualifications of a good janitor; care of lawns and shrubs; fire prevention in public buildings; heating and ventilation; proper handling of supplies; cleaning and summer closing of schools; getting ready for the fall opening; beautifying school lawns.

By way of comment, it may be said that the Kansas janitorial schools have lifted the janitor-engineer service to a distinctly high-grade occupation equal to the best of the skilled trades, have brought greater self-respect to the lives of the several students, and have increased the incentive for more intelligent work. They have also given the school housekeeper a better appreciation of the part that he plays in the scheme of things and the contribution he can make to the training of the youth of the land.

TEACHERS' SALARIES

♦ The board of education of East St. Louis, Ill., has voted \$27,000 or a 2.73 per cent restoration of salaries, affecting 400 teachers.

♦ The board of education of Waltham, Mass., has proposed the preparation of a new salary schedule for men teachers of the school staff. As a preliminary step, the board has voted to increase men teachers' salaries at the rate of \$100 a year up to a maximum of \$2,000. A schedule for women teachers has been in operation for some years.



Begin the new term

WITH B & L MODEL HH MICROSCOPES

The school science laboratory equipped with Bausch & Lomb HH Microscopes is in an enviable teaching position. From the instrument standpoint, both instructor and students enjoy the advantage in having available sturdy and adaptable apparatus incorporating the latest developments in approved microscopic design.

For instance, the B & L Model HH Microscope has a large stage (115 x 130mm) a sturdy rigid base, handle type arm, coarse and fine focusing adjustments and objectives and eyepieces all identical in quality with the most advanced B & L Laboratory Microscopes.

Then too, equipped with HH Microscopes, you are able to train your students in the use of the same type of instrument that they will employ in any subsequent career, in which microscopy plays a part.

For complete details write to Bausch & Lomb Optical Co., 673 St. Paul Street, Rochester, N. Y.

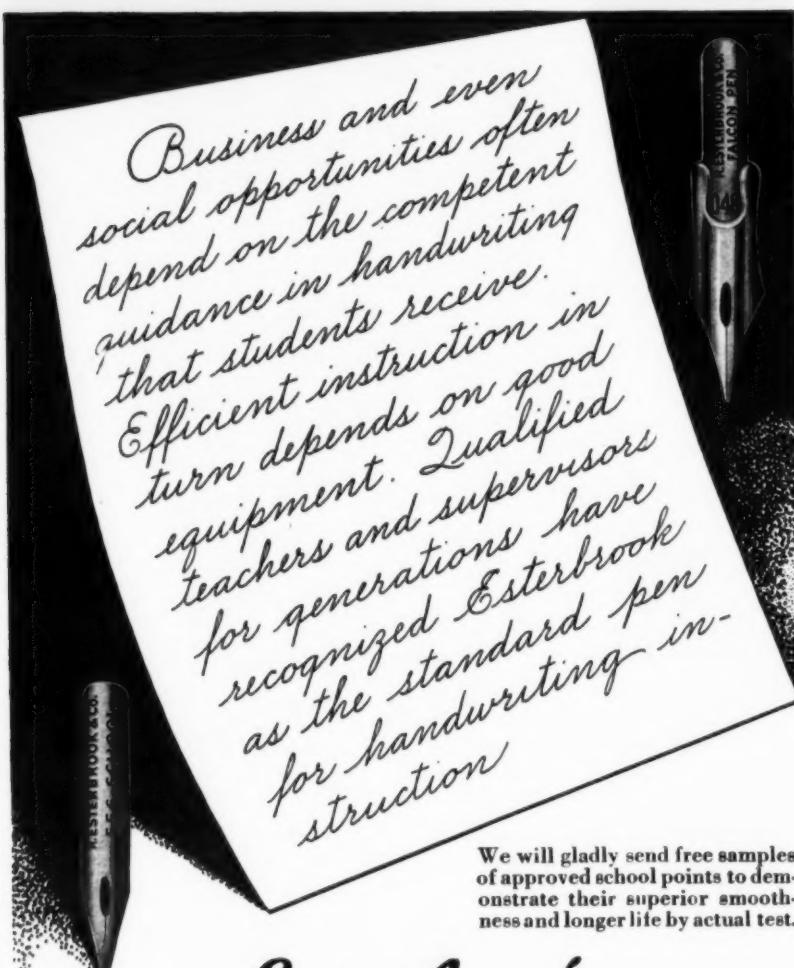
*Ask for special prices on quantities of the HH Microscope.

Bausch & Lomb

WE MAKE OUR OWN GLASS TO
INSURE STANDARDIZED PRODUCTION



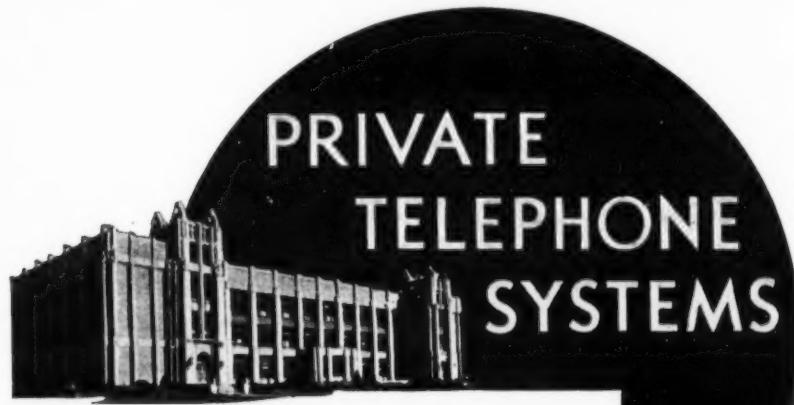
FOR YOUR GLASSES, INSIST ON B & L
ORTHOGON LENSES AND B & L FRAMES



Esterbrook

STEEL PEN MFG. CO.

64 Cooper Street, Camden, N. J. or Brown Bros., Ltd., Toronto, Canada



Modern school administration requires facilities for quick intercommunication between classroom, principal's office, study halls, janitor's quarters, etc. Timewasting trips must be avoided . . . classrooms must be kept supervised. With quick, easy intercommunication always available, teaching staff activities are raised to a much higher plane of effectiveness.

But when you select a communication system, be sure it's the finest obtainable. Automatic Electric private telephone systems have been serving schools for a generation. These systems include the well-known P-A-X (Private Automatic Telephone Exchange—in use in over 200 schools and colleges), and the more moderately priced Intercom. systems for smaller schools.

Write for literature describing these systems in detail.

AUTOMATIC ELECTRIC
TELEPHONE, COMMUNICATION AND SIGNALING
PRODUCTS

Distributed by:

AMERICAN AUTOMATIC ELECTRIC SALES CO.
1033 West Van Buren Street CHICAGO



Uniform brilliance

Another eye-safeguarding requirement best met by

Bell & Howell FILMO Projectors

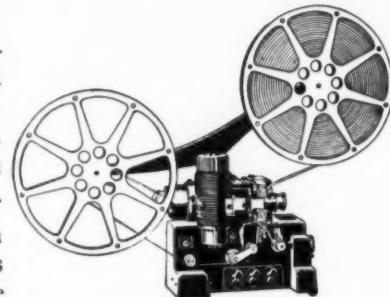
Before you buy any projector, ask to have it throw a clear ray on your screen—with no film in the machine. Then, test the illumination with a foot-candle meter.

Does the needle jump high at the center and drop as you reach the edges of the screen? Not if the projector is a Bell & Howell Filmo!

With a Filmo the entire screen surface is brilliantly, evenly illuminated—because of a perfected shutter and optical system.

Before you buy, *test!* See the uniform brilliance, the freedom from flicker, that are characteristic of Filmo projectors—both so vital in safeguarding the eyes of young and old alike.

There are silent and sound Filmo 16 mm. projectors for every school need, priced from \$130. Write for catalogs.

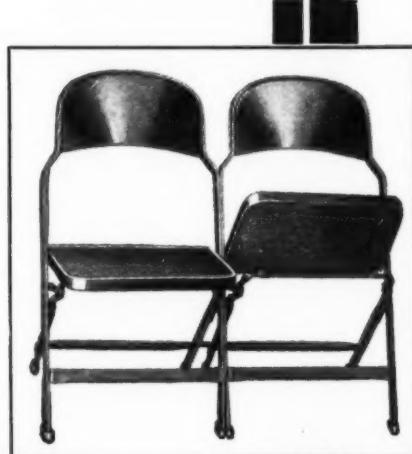


BELL & HOWELL COMPANY
1814 Larchmont Ave., Chicago • New York • Hollywood • London

Since 1907 the world's largest manufacturer of precision equipment for motion picture studios of Hollywood and the world

The

**IDEAL
PORTABLE
chair**



- Quiet in operation
- Comfortable in use
- Economical in cost!

CLARIN MFG. CO.

4640 W. Harrison St.,
CHICAGO, ILL.



C-1824

EVER-HOLD
TRADE MARK

**Fully Automatic-Adjustable
Stools and Chairs**

The ideal chair for instructor and student. Body form seat and back. 16" to 20" adjustment.

Finish is median brown. Equipped with special glides for use on composition floors.



F-1824

This stool, with its dished steel seat and 18" to 24" adjustment, is indispensable in the general laboratory and vocational departments. The finish is olive green. Equipped with special glides for use on composition floors.

**PRECISION MADE — Built for
Service — Write for Catalog**

Write for Catalog illustrating full line of adjustable stools and chairs—also non-adjustable steel angle stools.

**MASTER - KEYED
Combination Locks**

Kewaunee Combination Locks outdate all other types for school and institution uses. There are three kinds—(1) Kewaunee Master Keyed Combination Padlocks, (2) Kewaunee Combination Padlocks, (3) Kewaunee Master Keyed Combination Mortised Cabinet Locks.

Master Keyed Combination Padlocks offer absolute safety and protection with the least possible bother to the instructor in charge and eliminate the key loss expense on all institutional furniture. Master Key opens

locks when combination is forgotten. Combination on slide bar comes out when Master Key is used, thus making master charts unnecessary.

Combination Padlocks

Self locking, 216,000 combination changes, extremely secure. Combination cannot be felt out and cannot be opened except by use of correct combination. Stainless Steel Case. Master Chart furnished with each order, which permits easy and accurate administration of the locks.

Send for Free Lock Catalog-Folder

Write today for our free Lock Catalog-Folder. It gives complete details regarding all combination locks. No obligation on your part. Simply say—"Send Kewaunee Lock Catalog-Folder."

Kewaunee Mfg. Co.
LABORATORY FURNITURE EXPERTS

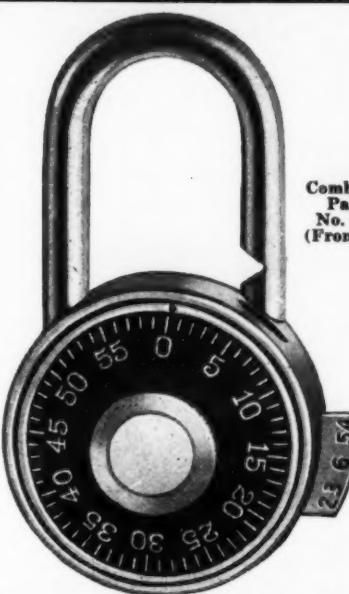
Established 1903
KEWAUNEE, WIS. - ADRIAN, MICH.



Combination Padlock No. K-16A (Front View)



Padlock Combination No. K-45A (Rear View)



Combination Padlock No. K-45A (Front View)

School Building News

SCHOOL-BUILDING CONSTRUCTION

During the month of July, contracts were let for seventeen new school buildings in the eleven states west of the Rocky Mountains. The total cost will be \$791,770. Seventeen additional projects are reported in the preliminary stages, previous to the letting of contracts. The cost of these, it is estimated, will be \$1,237,100.

In 37 states east of the Rockies, Dodge reports contracts let for 484 educational buildings. These will include the construction of 4,487,900 square feet, at a total cost of \$23,293,300.

SCHOOL-BOND SALES

During the month of July, school-bond sales were reported in the amount of \$6,528,430. Short-term notes, tax-anticipation notes, and refunding bonds in the amount of \$5,036,450, were also reported.

The average interest rate was 2.95 per cent.

BUILDING NEWS

♦ The cornerstone for the new high school in Ansonia, Conn., which has been described as "the first modern public high school," building was laid on August 4, in the presence of educators from all parts of the country.

The school, which was designed by Mr. William Lescaze and is being erected with PWA funds, will be ready for use in the early part of 1937. It is an example of functional architecture, advocated by Mr. Lescaze, and the disposition of the various areas was determined by orientation and environment. The auditorium was placed near the main thoroughfares to insure easy accessibility and the library has been centrally located for easy control of adult evening education. The cafeteria was located at a distance from the classrooms and is accessible from all parts of the building.

♦ A total of 85 fires occurred in Illinois school buildings during the year June, 1935 to 1936, according to a report of State Superintendent John A. Wieland. The loss totaled \$212,112.

♦ Otsego, Mich. The school plant has been renovated through the installation of new mechanical equipment, the addition of special classroom and shop equipment, and refinishing of floors. New equipment was installed in the commercial, shop, science, and home-economics departments. Twelve rooms in one of the buildings were treated to refinished floors, and new steam lines were laid from the boiler house to the main building.

♦ Hillsdale, Mich. The new Carl L. Bailey School, an eleven-room elementary school, is being erected as an addition to the present school plant. It includes accommodations for pupils of the first six grades and provides an auditorium, a gymnasium, a lunchroom, and a kindergarten. The building was planned by Mr. Warren S. Holmes, Lansing, Mich., and will be completed at a cost of approximately \$150,000.

♦ Meridian, Miss. The board of education has begun work on a new senior high school, to cost \$350,000. The building is being erected as part of a building program, estimated to cost \$700,000. A high school for Negroes, to cost \$150,000, will be completed and occupied in September, 1937.

♦ Waltham, Mass. Two additions, comprising 24 new rooms, have been erected at the senior high school to increase the classroom accommodations in the school. The old building was remodeled and improved, with the addition of new laboratory facilities, a cafeteria, an office suite, new sanitary system, and new heating and ventilating plant. A large, double gymnasium, with sliding partition, also has been provided. The additional accommodations were made possible with the aid of PWA grants and the total cost amounted to \$234,000 and \$85,000 respectively.

♦ Mt. Pleasant, Mich. A new elementary school, completed during the early summer, was occupied on September 1. The building is well arranged and has a beautiful appearance architecturally.

♦ Bangor, Maine. A six-room addition has been erected to the Fairmount Public School to relieve over-crowded conditions.

♦ International Falls, Minn. A new junior high school, to accommodate 700 students, is being erected, at a cost of approximately \$375,000. The building, which is being erected with the aid of PWA funds, will be completely equipped, and will be occupied during the second semester of 1937.

♦ Caro, Mich. During the summer vacation, the elementary school was redecorated and a number of improvements were made to the interior of the high school building.

♦ Turners Falls, Mass. The board of education has begun work on a new school-building program, comprising a gymnasium, an auditorium, and an addition of classrooms to the high school. All of the work is being carried out under PWA auspices, with the town furnishing \$107,500, and the PWA \$76,950. The addition will be used for the first time in September, but the other two projects will be completed later in the year.

♦ East Orange, N. J. Bids have been received for the construction of a junior high school, to cost \$696,252.

♦ Monroe, Mich. The board of education has voted to increase the insurance on the school plant from \$910,000 to \$1,092,000.

♦ Hopkins, Minn. An addition costing \$70,000, has been erected for the junior high school, to house the industrial-arts department, the home-economics section, the department of agriculture, the science section, the music room, and the general business-training department.

♦ Swanson, Mass. A new four-room school was occupied for the first time in September in the North Swanson section. The new building replaces three rural schools formerly in use. The school plant now comprises five elementary schools and one high school.

♦ Covington, Ky. The board of education has adopted a pay-as-you-go policy for the raising of a \$12,000,000 fund for a school-building program. The pay-as-you-go plan was adopted upon the suggestion of the federal experts who recently completed a survey of the public-school system.

♦ Southbridge, Mass. The board of education has awarded contracts totaling \$17,928 for equipping two elementary schools which have been completed and will be occupied for the first time in September. The equipment includes sight-saving desks, visual-education equipment, Bradley tables and chairs for the lower grades, and electric hand dryers.

♦ Palo Alto, Calif. The board of education has purchased a site for the new David Starr Jordan Junior High School. Plans are being prepared for a building to cost approximately \$360,000.

♦ Tulsa, Okla. The board of education has voted to proceed with its \$1,700,000 building program without the aid of federal funds. The proposed program calls for the construction of two high schools, additions to eleven elementary schools, and repairs to several buildings. A bond issue for school-building purposes was approved last May.

Standardizing Janitorial Service in Alhambra, California

Modern efficiency methods applied to the maintenance operations of public-school buildings have been discussed frequently in university courses on school administration and at conventions of school-business officials. In extremely few cities, however, have such methods been applied. For the vast majority of school systems job analyses of the janitorial service are merely nonexistent, and both the employment of man power and the actual planning of the janitor's day's work are left to the personal judgment of the school-board secretary or the superintendent of buildings.

While a few of the larger cities, like Minneapolis, Los Angeles, Pasadena, and St. Louis, have taken a long step forward toward standardizing janitorial-engineering work, it has remained for the city of Alhambra, Calif., to make a complete survey of the local schools and of the janitorial work, and to develop daily janitorial work-schedules based (a) on desirable community standards of efficiency, (b) a careful job analysis of each janitor's work, and (c) a comparative study of local performance averages and other accepted standards.

The Alhambra Survey

The Alhambra program is based on a janitorial survey, conducted by WPA workers, under the direction of the director of research, Mr. M. R. Stokesbary. Previously in Alhambra the janitorial work in the high school was assigned on the "square-foot" basis. This was the only standard available and was found to have considerable merit because it gave some clue to providing a reasonable working load for each of the janitorial employees. However, it was not found to be a fully satisfactory means of assigning work because of the many types of jobs performed, and the variations in building construction and equipment.

In the fall of 1935, WPA workers were employed to make a survey which should include the follow-

ing five points: (1) a time and motion study of all operations being done by each janitor over a period of several days; (2) a study of all the operations that should be done in each section of the school plant; (3) a study of the frequency with which each operation should be repeated; (4) a determination of the man power required to do the required amount of work in the given time; (5) a detailed schedule of work for each janitor, based upon the findings of the study.

All building employees of the school system were called together and the program was carefully explained. The WPA time checkers were then given detailed instructions and were equipped with record blanks and stop watches and sent out to follow the janitors and check the time required for each janitorial operation. The checkers were alternated so that four or five different men timed each janitor and cleaner over a period of several days each. At regular intervals the time records were tabulated, recapitulated, and averaged. Every effort was made to get accurate judgments based on a fair observance of the men working under normal conditions.

Job Time Standards

With this data before it, the management committee of the school system, composed of Dr. Geo. E. Bittinger, superintendent of schools, Mr. Geo. L. Yelland, business manager, the head janitor, and the director of research determined a workable standard time for each job (Table I).

While the time studies were being made, another crew of WPA workers was sent to each building to make a physical inventory of the structure and its contents, and to prepare lists of each of the types of work to be performed. All floors, areas, and surfaces to be cleaned were measured, and lists were made of all equipment which at any time required cleaning or adjusting by the janitors.

The average frequency of the various janitorial

operations was obtained from the records of the time checkers and from a complete report made by the head janitor. These frequencies were listed in tabular form and were directly compared with other existing standards. After careful consideration, the management committee recommended standard frequencies to be adopted for the Alhambra schools.

By combining the results of the time studies with the standard frequencies adopted, on especially designed summary sheets, it was possible to work out the man power required for each building. The minutes required for each job were for an entire school year and were divided by the number of minutes one man would put in while working his required hours per week for the school year. After careful checking of calculations and adding an average of thirty minutes per school day per worker for miscellaneous duties, and for teachers' calls and emergencies, the total janitorial power for each building was determined.

For the Alhambra High School, it was found that 10.66 men were required. While the study showed that the difference between the existing man power already at work in the high school, and the required man power, was only .65, it was made clear that some of the men were more heavily loaded than others, and that a redistribution of work was necessary.

Individual Schedules Developed

On the basis of the findings, a detailed, tentative individual schedule was made for each worker in the high school. These schedules were arranged by taking the individual jobs from the man-power recapitulation sheets, and arranging them, so that they would fit in with the teaching schedule of the day and of the evening classes. The location of each job was also checked so that the workers could go from job to job with the least amount of walking and carrying of equipment.

After the schedules had been in force a week, each worker was called in individually by the head janitor, and asked for suggestions on the improvement of his schedule. Following these conferences, the schedules were revised and permanent schedules for the year were adopted. Following the use of the schedules during most of the school year

(Concluded on Page 66)

TABLE I Minutes Required to Perform Janitorial Duties in Alhambra High School and Others					
Work to be Done	Alhambra Average	*Linn Standard	*Pasadena Standard	Recommended Standard	
Classrooms (Regular):					
Sweep Floors (per room)	10.36	7.5	7.5	80' per min.	
Dust Desk, Furniture, etc. (per room)	3.71	5.0	4.0	4.0	
Sweep Floors (per tent)	..	..	..	10.0 min.	
Dust Desk, Furniture, etc. (per tent)	..	..	..	2.0	
Dust Blackboards (per room)	2.25	..	5.0	2.0	
Wash Blackboards (per room)	7.65	..	..	7.0	
Classrooms (Special and Laboratory):					
Sweep Floors (per room)	18.31	13.0	13.0	80' per min.	
Dust Desk, Chairs, etc. (per room)	6.00	5.0	7.0	4.0	
Dust Blackboards (per room)	2.00	..	..	2.0	
Wash Blackboards (per room)	7.00	..	..	7.0	
Offices, Teachers' Rest Rooms, etc.:					
Dry Map Floors (per room)	3.10	5.0	5.0	4.0	
Vacuum Rugs (per rug)	..	..	..	4.0	
Dust Chairs, Furniture, etc. (per room)	11.25	5.0	4.0	6.0	
Clean Toilet Rooms	7.50	5.0	5.0	6.0	
Locker Rooms:					
Sweep Floors (per room)	27.30	..	..	180' per min.	
Dust Lockers, etc.	7.75	..	..	60 L. Feet per min.	
Empty Rubbish Cans	10.00	..	..	10.0 per bldg.	
Steps and Stairs:					
Sweep	17.65	..	40 sq.ft. per min.	40 sq. ft. per min.	
Dusting Rails, etc.	..	..	..	60 L. Feet per min.	
Auditorium (Capacity 1925 persons):					
Sweep Floors (six men)	28.00	..	48.2	28.0	
Dust Chairs, Furniture, etc.	28.00	..	18.0	28.0	
Hallways and Corridors:					
Sweep	11.60	180.0	180.0	180' per min.	
Dust Walls and Woodwork	..	..	..	60 L. Feet per min.	
Toilet Rooms:					
Sweep Floors	5.20	..	..	50' per min.	
Map Floors	11.00	..	9.0	35' per min.	
Scrub Floors	5.00	..	..	25' per min.	
Clean Urinals (each)	1.20	1.0	2.0	1.5	
Clean Toilet Bowls (each)	1.65	.5	2.0	1.5	
Clean Mirrors (each)	3.80	..	2.0	1.5	
Clean Wash Basins and Sinks (each)	2.20	3.0	2.0	2.5	
Refill Soap Containers (each)	4.30	..	..	1.5	
Refill Paper Towel Racks (each)	5.00	..	..	1.5	
Refill Toilet Paper Holders (each)	4.75	..	..	1.5	
Miscellaneous:					
Open and Close Windows (per room)	1.00	..	..	2.5	
Raise and Lower Shades (per room)	1.50	..	..	..
Raise and Lower Flag	6.00	10.0	10.0	4.0	
Clean Drinking Fountains (each)	2.00	2.0	4.0	2.0	
**Empty wastebaskets	1.55	..	4.5	..	
Clean Erasers (per room)	1.50	..	5.0	1.5	
Clean Tools and Equipment	15.00	15.0	..	10.0	
Sidewalks	..	..	..	200' per min.	

* Linn and Pasadena standards are based upon the square footage of the Alhambra City High School, as shown in this table.

** Included with sweeping time.

TABLE II Standard of Cleaning Frequencies					
Activity	Alhambra	Pasadena	Linn	E.R.W.	Recommended
Sweeping:					
Classrooms (Empty Waste Baskets)	D	D	D	D	D
Offices, Rest Rooms, etc.	D	D	D	D	D
Hallways	D	D	D	D	D
Stairs and Steps	D	D	D	D	D
Hallways and Corridors	D	D	D	D	D
Auditorium	2047	..	..	..	2W
Stage and Band Room	W	D	D	D	D
Kindergarten	D	D	D	D	D
Lockers	D	D	D	D	D
Girls' Gym (Main Court)	..	..	..	..	..
Wood Shop	..	..	..	..	..
Auto Shop	..	..	..	..	3W
Toilet Rooms	D	D	D	D	D
Forge Room	..	..	..	..	3W
Dusting:					
Classrooms, Offices, etc.	D	D	D	D	D
Hallways and Corridors	D	D	D	D	D
Stairs and Banisters	D	D	D	D	D
Auditorium and Stage	D	D	D	D	D
Radiators	D	W	..	2W	W
Lockers	D	..	..	W	W
Clean:					
Erasers (Distribute)	W	W	..	2W	W
Inkwell	M	D	..	W	D
Tools (Care of)	D	D	..	W	W
Toilet Rooms and Partitions	W	W	W	W	W
Sanitary Room Sinks	W	W	W	..	W
Drinking Fountains	D	D	D	W	D
Toilet Bowls, Urinals, etc.	SD	D	D	SD	D
Offices and Rest Room Toilets completely	D	D	D	D	D
Mop:					
Toilet Rooms	D	D	D	SD	D
Kindergarten (Dry Mop)	D	D	..	..	W
Linen	W	W	..	..	W
Spot Clean:					
Glass	D	D	D	SD	W
Walls (Wash)	..	..	..	..	W
Miscellaneous:					
Wash Blackboards	W	W	W	W	W
Hang and Take in Flag	D	D	D	D	D
Open and Lock Doors and Gates	D	D	D	D	D
Vacuum Rugs	W	W	..	..	W
Disinfect Gym Floors	W	W	..	..	W
Empty and Burn Rubbish	D	D	D	..	W
Hose Sidewalks	W	..	..	..	W

Note:

D - Daily W - Weekly M - Monthly Y - Yearly

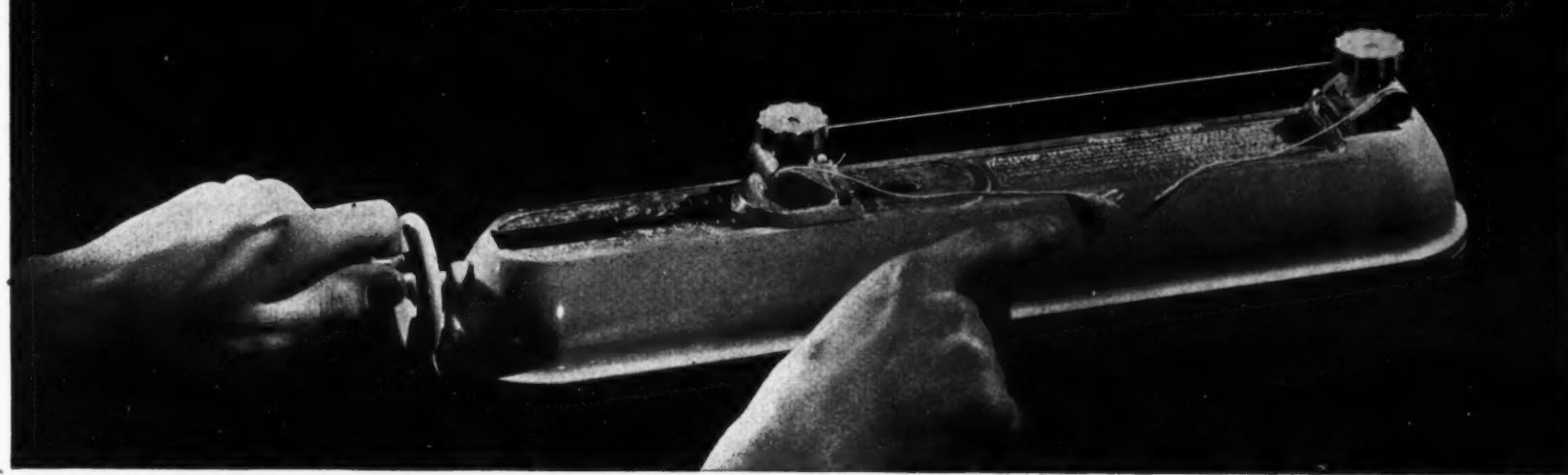
Number in front of letter designates the number of times.

TABLE II. ABOVE. STANDARD OF CLEANING FREQUENCIES IN ALHAMBRA, CALIFORNIA, AND OTHER CITIES

TABLE I, LEFT. MINUTES REQUIRED TO PERFORM TYPICAL JANITORIAL CLEANING OPERATIONS

GOODYEAR'S SAFER TREAD AND SAFER BODY GIVE YOU

GREATER SAFETY FOR SCHOOL BUSES



SEE THIS DEMONSTRATION!

One of a number of demonstrations any Goodyear dealer will be glad to make to prove beyond question the longer life and greater safety of Goodyears. It shows why Supertwist Cord used in Goodyears protects against blow-outs—continues protecting long after ordinary cord sags, snaps—lets go.

NEW GOODYEAR SURE GRIP TIRE



A "GO-ANYWHERE" TIRE!

An amazing new Goodyear for mud, snow, off-the-hard-road service. Husky, deep lug bars of tough rubber give positive grip in any going without chains. Self-cleaning, easy riding, long-lasting—SAFE. See it!

MORE AND MORE, school boards everywhere are insisting upon Goodyear Tires for their school buses. The reasons are these:

- School buses must be safe. And board members realize that their responsibility for the safety of their children frequently rests upon the tires on their buses—that only the tires often stand between the youngsters they carry and possible accident.
- And over and over again it has been proved that Goodyears not only last longer, hence cost less, but that they provide protection *inside and out* not equalled in any other tire.
- OUTSIDE—the All-Weather Tread with its deeper, heavier rubber and tougher gripping edges, offers the greatest known protection against skidding on wet, slippery streets or muddy roads—sure-grip for emergency stops.
- INSIDE—is the safest of all safeguards against blow-outs or carcass failure of any kind—Supertwist Cord Construction. This livelier, sturdier cord is an exclusive Goodyear feature.

The Goodyear dealer nearest you will be glad to demonstrate why these features make Goodyears safer for bus operation—why they save money—why you should specify them for both replacements and on new buses—whether your own or contract equipment.

THE GOODYEAR TIRE & RUBBER CO., INC., AKRON, OHIO

Listen to the Goodyear Broadcasts of the Literary Digest Poll for President—Monday, Wednesday, Friday Evenings NBC Blue Network.

LIFE GUARD* TUBE

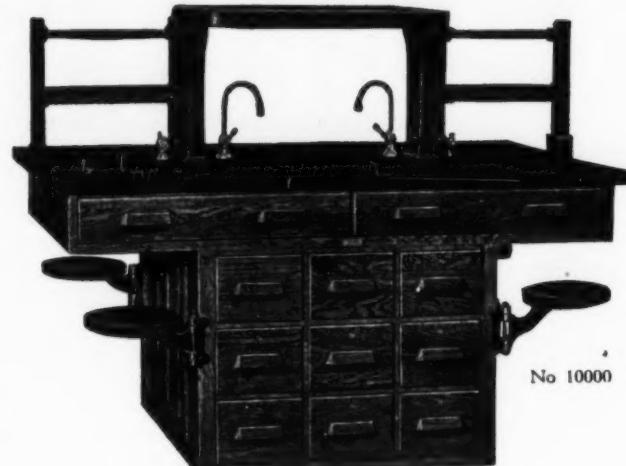
—gives infallible protection against blow-outs—protects children and equipment. It converts the effect of a blow-out to that of a slow leak—enables driver to bring bus to a slow, deliberate stop under full control.

*TRADE MARK REGISTERED

GOOD YEAR
TRUCK AND BUS TIRES *money savers*



PROTECT Your Investment — INVEST IN SHELDON



Sheldon No. 10,000-A

Complete practical and economical four pupil chemistry table for four classes.

* Your Home Economics, Vocational, Art, Science Laboratory and Commercial Furniture when engineered and manufactured by SHELDON IS A PROTECTED INVESTMENT — Protected by 36 years' experience and every possible modern manufacturing advantage.

SHELDON Representatives are at your service all over the country with over 1,000 complete standard designs and every facility for meeting any special requirement you may have.

Write for their assistance and for our complete catalog.

E. H. SHELDON & COMPANY — MUSKEGON, MICHIGAN

(Concluded from Page 64)

1935-36, it has been agreed that the study has improved the efficiency, as well as the quality of the work.

OTTUMWA STRUGGLES WITH REDUCED BUDGET AND A RISING SCHOOL POPULATION

The board of education and the administrative staff of the public-school system of Ottumwa, Iowa, following the experience of nearly every community in the country, has been facing the responsibility of trying to keep a much-decreased budget balanced in the face of an increasing enrollment of school children.

During the past three years, the Ottumwa schools have been struggling along on a property-tax income 25 per cent below that of normal times, in the face of a mounting school enrollment. The board recently voted to restore the school levy on which school districts of the state must still depend for almost 90 per cent of their revenue. The 1937 school levy per pupil will still be below that of several years ago, when the average was \$70.55 per pupil. During the school year 1936-37 the levy will be \$66.37.

The board of education is composed of the following: President, Mr. C. D. Evans; vice-president, Mr. Frank Raney; secretary, Mr. Walter McLain; finance chairman, Mr. C. C. Lowenberg; members, Mr. John Wormhoudt, Mr. M. S. Graham, Mr. W. H. McElroy, and Mr. Eugene Wulfkuhler.



THE OTTUMWA BOARD OF EDUCATION AND ITS EXECUTIVE OFFICERS

DEATH OF GEORGE HOWARD REED

George Howard Reed, 83 years old, founder and former manager of the school division of the Joseph Dixon Crucible Co., died on August 4, in Jersey City.

Born in 1853, in Kingston, Mass., Mr. Reed joined the Dixon organization in November, 1896. A man of



GEORGE HOWARD REED
—From a portrait made about 1897.

great affability, he was well acquainted with and highly regarded by school superintendents and school supervisors in state, county, and city. His pleasant personality and manner also won him many friends on the faculties of private schools and colleges in the East, and he was well known by all of them. This wide acquaintanceship stood him in good stead during his business career at the Dixon Company where he founded and managed the school department, being its active head for nearly a quarter of a century.

Mr. Reed, who was inactive during the past few years, leaves no family, his wife having died some months ago. He was buried in the Danvers Cemetery, Danvers, Mass.

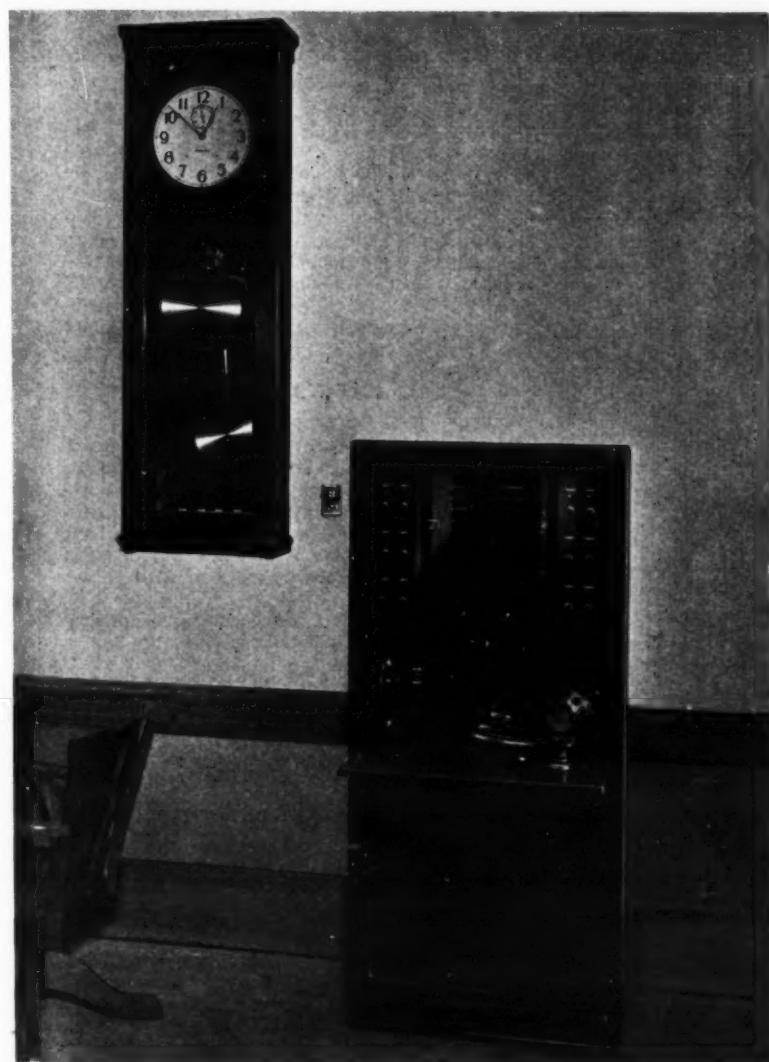
For School Economy

Twenty-six counties in Northern Wisconsin have passed land-zoning ordinances to prevent the settlement of marginal lands and isolated agricultural lands by farmers. The ordinances definitely provide that the land shall be used for forests and recreational purposes. The purpose is to avoid the high costs of schools and roads which require 50 per cent of the taxation in this sparsely settled region, which includes numerous lakes and large forests.



International

SOUND DISTRIBUTION, TIME and PROGRAM CONTROL SYSTEMS GIVE THEM BIGGER EDUCATIONAL OPPORTUNITIES



Students coming back this fall to the International-equipped school will find increased opportunities to learn . . . first, because there will be a maximum amount of classroom and study time . . . second, because of the greatly enlarged curriculum . . . and third, because the entire administrative and teaching staff will have more time to devote to their instruction.

International Time and Program Systems simplify the problem of schedule maintenance. Easily set up or quickly changed, the program bells ring when they're scheduled to ring . . . always in agreement with the clocks. Classes are moved correctly, without confusion or delay.

International Sound Distribution Systems bring a wider variety of instructive material to the classrooms to supplement the regular courses of study. The radio, phonograph and microphone facilities may be applied in countless ways to give students a broader working knowledge of the modern world.

Both systems conserve time in administrative and teaching routines . . . thus enabling the entire staff to achieve maximum results from the students entrusted to their care.

Ask the International representative for complete details and demonstrations of these and other International systems for schools—including fire alarm, telephone and laboratory experimental equipment.

INTERNATIONAL BUSINESS MACHINES CORPORATION

GENERAL OFFICES, 270 BROADWAY, NEW YORK, N. Y.



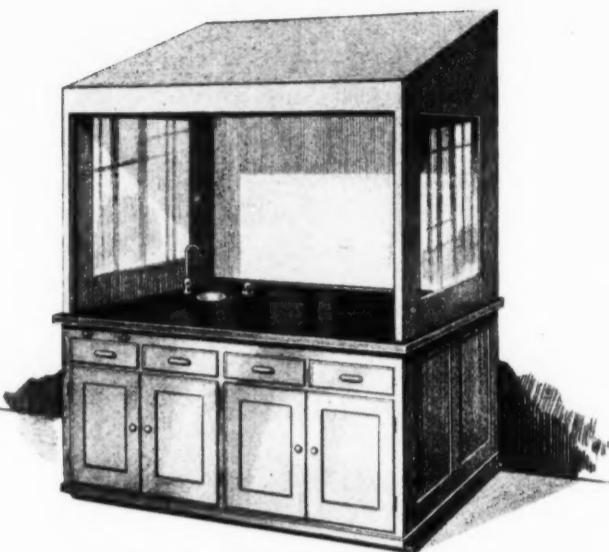
BRANCH OFFICES IN THE PRINCIPAL CITIES OF THE WORLD.

Absolute Safety and Protection Plus Maximum Adaptability

Fume hoods by Hamilton-Invincible are designed, constructed and **carefully pre-tested** to meet every requirement of safety and protection in the school, college and industrial laboratory.

All models are built with double-baffle backs and plenum chamber to exhaust both lighter and heavier-than-air gases completely and efficiently. Adequate ventilating fans and ducts insure satisfactory operation under all conditions.

Upper hood sections are available in a variety of approved materials. Base units, in standardized sizes and designs, as well as fixtures and service outlets may be varied to meet your specifications.



Fume Hood No. No. 1A-910 . . .

For detailed description see section 9 of catalog. If you haven't a copy, ask us to send you one.

HAMILTON-INVINCIBLE, INC.

Sales and General Offices Two Rivers, Wis.
AUTHORIZED REPRESENTATIVES IN PRINCIPAL CITIES

HAMILTON-INVINCIBLE LABORATORY VOCATIONAL AND LIBRARY FURNITURE



School Finance and Taxation

SCHOOL COSTS IN 1933-34

The United States Office of Education has compiled the final cost figures for the conduct of state school systems during the academic year 1933-34. Current expenditures for the public day schools was \$1,515,530,276. Capital outlay during this period was only \$59,276,555, and interest amounted to \$137,036,525.

The decrease in general expense over 1931-32 was \$294,408,740. The reduction in capital outlay over the same period was \$151,719,707.

SCHOOL PROGRESS AT EAST WATERLOO

School finances in East Waterloo, Iowa, have been progressing steadily and satisfactorily due to the careful policies recommended to the board of education by Mr. Charles N. Hostetler, secretary of the board of education, and applied by the board to its business-administration budget. The issuance of refunding bonds made necessary by the local tax situation has been handled under a state law, which requires that annual maturities be provided for. The outstanding bonds in September, 1933, amounted to \$571,000, and on the close of business July 31, 1936, had been reduced to \$441,000.

During the five-year period from June 30, 1930, to June 30, 1935, the East Waterloo schools have shown a steady reduction in practically all expenses in spite of the fact that there has been some increase in the total school population. These savings have been resulted as a result of careful administration and close control of the building operation and maintenance. Expenses of general control were reduced during the period from \$12,361 in 1930-31 to \$9,853 in 1934-35; operation from \$44,443 in 1930-31 to \$35,723 in 1934-35; instruction from \$240,273 in 1930-31 to \$184,605 in 1934-35; maintenance from \$17,847 in 1930-31 to \$5,995 in 1934-35; capital outlay from \$2,488 in 1930-31 to \$905.50 in 1934-35. The total saving in expenditures during the five-year period amounted to \$77,988, the larger part of which was effected in instruction and operating expenses.

Under a new system adopted by the board, the purchasing of the school system is in charge of a supply committee, which recommends purchases to the board, after bids are received and tabulated. The state law

recommends that purchases be made from firms who manufacture Iowa products, or local concerns, provided the quality of the materials is of equal standard. The accounting of the school systems is practically standardized under the Iowa law.

The school system employs a building superintendent and janitorial supervisor, combined in one position, who has authority to issue purchase requisitions after approval of requisition by the superintendent and the board. The system has proved a saving in the use of operation supplies, since the janitors are better informed in the work and they are able to effect savings because of the elimination of unnecessary materials and supplies.

The board has completed the erection of a concrete wall around part of the athletic field, at a cost of \$12,300. Other building projects undertaken have been alterations to the senior-high-school gymnasium, at a cost of \$7,500, waterproofing of walls and redecoration of one of the grade-school buildings, at a cost of \$1,500. A new junior-high-school domestic-science department was installed last fall, at a cost of \$3,000.

The school board has approved a suggestion, calling for salary increases of 5 per cent for teachers during the school year 1936-37.

SCHOOL FINANCES IN CHARLOTTE, NORTH CAROLINA

The expediency of keeping the finances of a school system on an even keel, by anticipating both state and local support with reasonable accuracy and building budgets accordingly, has been demonstrated by the board of education in Charlotte, North Carolina.

In 1933, North Carolina took over the control of all public schools for the state term of eight months, paying the operating expenses thereof, based on state standards. In Charlotte, this resulted in a reduction of costs in 1933-34 to \$344,104.97, and a unit cost per pupil of \$22.02, compared with a cost of \$874,417.88 in the peak year of 1930-31, when the unit cost per pupil was \$60.91.

In 1935, Charlotte voted in favor of a supplemental school-tax levy of not to exceed 25 cents on each \$100 of valuation, so that for 1935-36, the operating costs of the schools increased to \$638,899.06, and the per capita pupil cost was \$40.65. This supplement provided for the entire cost of operating the schools during the ninth month and the establishment of a twelfth grade. Besides accomplishing these things, the teachers' salaries were increased up to a maximum of \$1,200 a year for another nine months' period and the salaries of principals, executives, and all other personnel were

raised, supplementing at the same time, the state funds for plant operation and additional janitorial help. For the 1936-37 budget, a total of \$700,000 is fixed, permitting the employment of twenty additional teachers.

"We operate on a cash basis only," said Charles Blackburn, business manager of the Charlotte school system, "and have not borrowed in anticipation of tax collection for several years. By making a budget not to exceed the amount we know the state will provide, and our own tax collections, we keep out of the red, meet our expenses promptly, and can count on a surplus at the end of each year."

FINANCE AND TAXATION

♦ Chicago, Ill. The city spent \$6.90 less per child for its public schools in 1934-35 than the average for 73 other cities of the country with 100,000 population, according to a statement of J. W. Studebaker, U. S. Commissioner of Education. The Chicago expenditure per child, based on an average daily attendance in full-time day schools, was estimated as \$94.27, as compared with the nation's average of \$101.17 for large cities.

Chicago spent \$3.03 per child for school administration, Mr. Studebaker reported, or 3.2 per cent of the total school cost, as compared with 3 per cent of the total cost spent in other cities. The instruction costs were 70.3 per cent of the total, as compared with 78.1 per cent for the average.

♦ Oklahoma City, Okla. The board of education closed its fiscal year on July 1, with a balance for the first time in the history of the schools. Mr. J. G. Stearley, business manager, in his report to the school board, said that funds are available to take up all the outstanding general fund warrants for 1934-35 and for 1935-36. The outstanding warrants total \$663,471.

♦ The finances of the Ecorse Township School Dist. No. 1, at Melvindale, Mich., are looking up and the board of education is in position to extend the services of the schools in a way which has not been possible in recent years. Under the improved situation, the board has taken action, placing the teachers on a new salary schedule, based on training and experience. Each teacher, under the schedule, is paid the salary which her training and experience calls for, and an annual salary increment of \$150. It has also been possible to reduce the teaching load through the addition of more teachers, both in the high school and grades. The school year has been extended to nine and one-half months, and beginning with the year 1936-37 it will be extended to ten months.



THE MCKINLEY SCHOOL, Montrose, New York, is equipped with a Telechron (Automatic Dual Motor Resetting) system consisting of 18 clocks, program instrument and central control equipment. Installed by the Westchester Electric Equipment Co., in December, 1933. Knappe and Morris, architects.

CLASSES MOVE EFFICIENTLY ON *Telechron* TIME

● The entire academic schedule runs more smoothly when classes move on efficient Telechron time. Quiet, precise Telechron clock systems guard against confusion that upsets the school day. Officials of schools both large and small—all over the country—attest to this.

Each Telechron clock is an independent time-keeper. It may be installed as a single unit—or as part of a great system of hundreds of Telechrons, centrally controlled, each indicating the same precise time.

The Telechron Company makes a variety of systems for all types of schools. The original cost of a Telechron system is low—operating and maintenance costs are negligible.

A letter to us will bring one of our representatives to discuss your particular problem with you. No obligation on your part, of course.

WARREN TELECHRON COMPANY
996 MAIN STREET ASHLAND, MASSACHUSETTS



NORRIS SCHOOL, Norris, Tennessee, is equipped with a Telechron (Manual Dual Motor Resetting) system. Installed by T.V.A., in 1935—Architect and Contractor, T.V.A.—Engineer, J. J. Noel, T.V.A.

MINUTES of this LONG, LONG HOURS of this

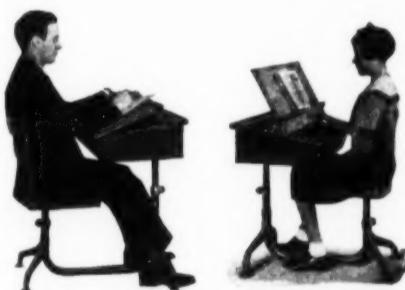


WHY should long hours spent in antiquated, ill-designed seats . . . with vital organs cramped and their functioning retarded, eyes strained, health principles violated . . . be permitted to counteract the effect of a fine school health program?

Classroom furniture should serve as a corrective of some of the physically harmful tendencies which any intensive educational program must inevitably impose on youth.

That is why educators should provide pupils with the American Universal Better-Sight Desk . . . a type of school seat which induces good habits of posture and minimizes eyestrain.

Classroom posture posters and interesting pamphlets relating to healthful posture and eye-protection are available for teacher's use. Address Dept. A.S.B.9.



The American Universal Better-Sight Desk

ACCEPTED BY THE COUNCIL ON PHYSICAL THERAPY
OF THE AMERICAN MEDICAL ASSOCIATION

AMERICAN SEATING COMPANY



*Makers of Dependable Seating for Schools,
Churches and Public Auditoriums*

General Offices: GRAND RAPIDS, MICHIGAN
DISTRIBUTING BRANCHES IN ALL TRADE AREA

YOU USED THE BEST WHEN YOU BUILT NOW USE THE BEST IN MAINTENANCE!

TILEOLEUM Sassafras

A non-acid floor cleanser that cleans thoroughly yet gently. So gently in fact, that the brilliance and coloring of tile, terrazzo, composition, etc. remain unharmed though the floor be cleaned frequently.

SUNGLOH Floor Wax

Dries to a hard beautiful gloss without buffing. The original floor surface, when treated regularly with Sungloh, will last, unchanged, indefinitely. The finish is not slippery.

Serving Schools For Over a Third of a Century

Write Dept. S. B. J. 9.

MIDLAND Chemical Lab's., Inc. AT DUBUQUE, IOWA



Personal News of Superintendents

• DR. C. B. GLENN, superintendent of schools at Birmingham, Ala., has been asked by a group of Southern educators to permit his name to be presented to the Department of Superintendence as a candidate for the presidency. Dr. Glenn has been active in the Department for many years and has been prominently before superintendents of the country as a speaker at national conventions and as a committee member and chairman of important standing committees. The group interested in his candidacy is headed by Mr. Frank L. Grove, secretary of the Alabama Education Association, Montgomery.

• MR. ELLIS H. CHAMPLIN, formerly director of physical education in Buffalo, N. Y., has been appointed chief of the physical-education bureau of the State Education Department at Albany. Mr. Champlin, who entered upon his duties September 1, is a native of Friendship, N. Y., and completed his professional training at Teachers College, Temple University, and received his bachelor of science degree from Buffalo University. His graduate work was completed at Buffalo and Syracuse universities.

• DR. H. S. BULKELEY has been re-elected president of the school board of Rhinebeck, N. Y., for another year.

• MR. LAWRENCE WEAVER, of Ottawa Hills, Ohio, has been elected superintendent of schools in Marion township, Hamler, Ohio.

• MR. H. L. SAMS, of Columbus, Ohio, has been elected superintendent of schools at Williamsport.

• MR. EDWARD GLENN, formerly principal of the high school at Wadesville, Ind., has been elected superintendent of schools. He succeeds C. H. Melton.

• Supt. E. C. Vining, of Lowell, Mass., has been given an increase in salary from \$3,500 to \$3,750.

• Supt. W. A. EGGERT, of Blue Island, Ill., has been re-elected for the next school year.

• MR. H. H. EIBLING has assumed his duties as superintendent of schools at Maumee, Ohio.

• MR. MELVIN G. DAVIS has assumed his duties as superintendent of schools at Lake Forest, Ill.

• MR. J. M. SCUDDER, for 25 years superintendent of schools at Huntington, Ind., has retired after the completion of forty years of service in educational work. Mr. Scudder is succeeded by C. E. Byers, formerly principal of the Huntington high school.

• MR. W. SCOTT McHENRY has assumed his duties as supervising principal at Pemberton, N. J. He succeeds Paul R. Jones, who has gone to Palmyra.

• MR. DONALD PYERS has been elected superintendent of the rural consolidated schools at Middleburg, Ohio.

• MR. F. E. CONDER has been elected superintendent of schools at Rising Sun, Ind., to succeed M. A. Turner.

• MR. F. C. SCHWARTZ, of Wadena, Minn., has been elected superintendent of schools at Biwabik.

• MR. P. L. FJELSTED, of Biwabik, Minn., goes to Wadena, where he succeeds F. C. Schwartz.

• MR. T. S. JENKINS has accepted the superintendency of

the Collins consolidated schools in Huron County.

• MR. O. H. OLSEN, of Reed City, Mich., has taken the position of supervising principal at Dearborn.

• Supt. W. A. ANDREWS, of Lake City, Minn., was a visiting instructor at the St. Cloud Teachers' College during the summer session, where he taught the courses in school administration and secondary school technique. Mr. Andrews completed his fourth year at the St. Cloud Summer School.

• DR. PAUL V. SANGREN has been appointed president of the Western State Teachers College at Kalamazoo, Mich. Dr. Sangren has been a member of the faculty since 1923 when he became professor of education. In 1926 he was appointed director of educational research and head of the department of education and psychology. In 1934 he was made dean of administration.

• DR. S. MUNROE GRAVES, who was removed as superintendent of schools by the school committee of Wellesley Hills, Mass., has brought court proceedings for his reinstatement. He claims that he was removed without cause, and without a public hearing. Upon his dismissal, the committee appointed Edwin C. Miner, of Cheney, Wash., as his successor.

• MR. BENJAMIN KLAGER, of Manistee, Mich., has been elected superintendent of schools at Bay City, to succeed G. L. Jenner.

• Supt. J. J. WIGGINS, of Lynchburg, Ohio, has been re-elected for a three-year term.

• MR. W. K. WEST, of Leesburg, Ohio, has been elected superintendent of the new Leesburg-Highland District school system.

• MR. THOMAS K. OWENS has been elected superintendent of schools at Jackson, Ohio. He succeeds H. L. Bates.

• MR. ALBERT E. TUTTLE, formerly principal of the high school at Mamaroneck, N. Y., has been appointed assistant superintendent of schools.

• MR. WILLIAM J. LOWRY has succeeded the late Frank T. Vasey as superintendent of schools at Springfield, Ill.

• MR. E. R. SIFERT, of Oklahoma City, Okla., has been elected superintendent of the Proviso Township High School in Maywood, Ill. He succeeds H. H. Elkima.

• MR. A. PAUL PORTER, of Morrow, Ohio, has been elected superintendent of schools in the Liberty-Union District at Basil.

• MR. C. L. MACK, of Marion, Ind., has become superintendent of schools at Amboy.

• MR. O. B. PETERSON, of Traverse City, Mich., has been elected superintendent of schools at Montgomery.

• MR. E. H. POTEET, of Mercedes, Tex., has become superintendent of schools at Mexia.

• MR. L. A. ARRINGTON has been elected superintendent of schools at Port Washington, Ohio. He succeeds Paul O. Cochran.

• DR. EDWIN MINER has assumed the duties of superintendent of schools at Wellesley, Mass. He succeeds Dr. S. M. Graves.

• MR. ANGUS I. MESSICK, of Lawrence County, Ind., has been elected superintendent of schools at Jasonville, Ind.

• MR. ADELBERT HUBER has been elected superintendent of schools at Onsted, Mich.

• MR. JESSE RAY OVERTURE, formerly deputy superintendent of schools in Sacramento, Calif., has become superintendent of schools in Palo Alto. He succeeds A. C. Barker, who has retired.

• PROF. JOHN C. ALMACK, of Stanford University, is recover-

ing from injuries received in an automobile accident on June 16. He will resume his work in October.

• DR. J. T. HANCOCK, of Afton, Iowa, has been elected superintendent of schools at Grundy Center.

• Supt. JOHN S. PAGE, of Howell, Mich., has been re-elected for a new three-year term. Mr. Page is beginning his fifteenth year as head of the public-school system.

• DR. J. H. FOOTE has been elected president of the school board at Potsdam, N. Y.

• DR. J. W. THOMSON has been re-elected president of the school board of Garrett, Ind., for a fourth term of three years. DR. J. A. CLEVENGER was elected secretary, and MR. D. B. VAN FLEIT treasurer.

• The school board of Emporia, Kans., has re-elected F. B. HEATH as president. MR. ORA G. RINDOM was elected vice-president, and MISS NORA WOOD was named secretary.

• The school board at Virginia, Minn., has elected SAM SLADE president, ANDREW GRONSETH clerk, and EARL HEISEL treasurer.

• The school board at Fort Scott, Kans., has re-elected HARRY CRANE as president, W. V. DIXON clerk, and E. A. SHAVER as treasurer.

• DR. H. B. MCKIBBON has been re-elected as president of the school board at Wichita, Kans.

• MR. HOMER A. KUENZLI has been elected superintendent of schools at Nevada, Ohio.

• DR. THEODORE L. RELLER, assistant professor of education at the University of Pennsylvania, has returned to the United States, after a year spent in a study of special features of school administration of the larger cities of England and Scotland. His investigation will be of interest to school authorities following his recent study of school administration in the larger cities of the United States.

• DR. DONALD ROEDER, of Harrod, Ohio, has assumed the duties of superintendent of schools at Mt. Gilead.

• DR. H. W. THOMAS has become superintendent of schools at Plainville, Conn.

• DR. PAUL V. SANGREN has been appointed president of the Western State Teachers' College at Kalamazoo, Mich., to succeed Dwight B. Waldo.

• DR. DWIGHT YORK, of Shelbyville, Ill., has been elected assistant superintendent of schools at Decatur.

• DR. RALPH B. RUBINS, superintendent of schools at Bristol, Tenn., died suddenly of a heart attack in Norfolk, Va., on August 10.

DR. FRANK M. McMURRY DIES

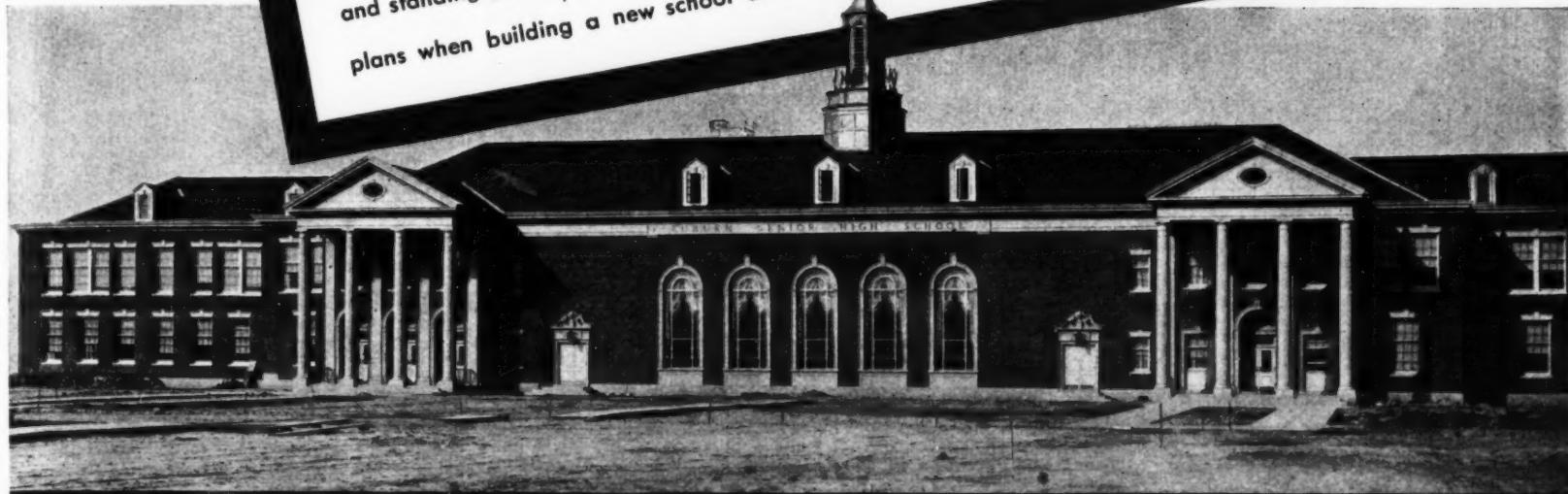
Dr. Frank M. McMurry, professor emeritus of elementary education at Teachers College, Columbia University, died suddenly at his home in Pawling, N. Y., on August 1, following an attack of heart disease. He was 74 years old.

Dr. McMurry, who was born at Crawfordsville, Ind., studied at the University of Michigan in 1881-82, at the Universities of Halle and Jena from 1886 to 1889, and at Geneva and Paris in 1892-93. He received his Ph.D. degree at Jena in 1889.

Dr. McMurry began his teaching career as a high-school principal in Chicago. He was professor of pedagogy at the State Normal School, Normal, Ill., and at the University of Illinois. Later he became professor of pedagogics and dean of Teachers College University of Buffalo, serving from 1895 to 1898. He was professor of elementary education at Teachers College from 1898 until his retirement in 1927.

EVERY SCHOOL NEEDS SOUND CONDITIONING!

When noise is effectively controlled, students progress faster—are more creative. Average school grades are higher—discipline easier to maintain. School reputation and standing go up! Sound conditioning should be a fundamental part of the plans when building a new school or when improving one already in service.



For BETTER Sound Conditioning, Choose ACOUSTI-CELOTEX

PERMANENT! EASY TO APPLY! PAINTABLE!

EFFECTIVE and permanent noise control with Acousti-Celotex makes any school a BETTER school. In classrooms, study halls and libraries it hushes the noise which comes from the students themselves—from their movements, whispers, undertones.

It limits the spread of noise in corridors, gymnasiums, lunch rooms and other natural noise centers—it absorbs noises originating outside the building.

It is also highly efficient in correcting acoustics in auditoriums and lecture halls.

Acousti-Celotex is durable—it will last as long as the building—and is protected by the Ferox Process (patented)

against destruction by Dry Rot, Fungus Growths and Termites (white ants). It is easily and economically installed in new construction or over existing ceilings—and can be arranged in a variety of attractive patterns; easily stenciled for special decorative effects.

Since its sound-absorbing qualities are produced by its patented perforations (441 to the square foot) they are NOT AFFECTED by painting or washing. Light-reflecting values are easily maintained without impairing its acoustical properties.

The Acousti-Celotex Distributor nearest you will be glad to make recommendations concerning your particular noise problems. Look for his name in the Classified Telephone Directory or write to Celotex for data and estimates.

THE CELOTEX CORPORATION, 919 North Michigan Avenue, Chicago, Illinois
Sales Distributors in Principal Cities Throughout the World



AND ACOUSTI-CELOTEX
IS PAINTABLE

PAINTABLE
ACOUSTI-CELOTEX
TRADE MARK REGISTERED

PERMANENT

U. S. PATENT OFFICE

LIQUA-SAN "C"

LIQUID TOILET SOAP

Safe
ON TENDER SKINS



LIQUA-SAN "C"—40% concentrated—contains not only the finest cocoanut oil, but also a generous amount of olive oil. Thus, its soothing lather assures gentle cleansing action—even on the most tender skin. In addition, it gives hands and faces added protection against irritations and chapping. You can buy no finer soap than Liqua-San "C". It lathers easily in hard or soft water . . . cleanses quickly. The high soap content permits great dilution—assures substantial savings in soap costs.

THE SANA-LATHER FOAM TYPE SOAP DISPENSER

This dispenser turns out soap in foam form—the ideal way in which to use soap. Because the foam discharged consists of only 1% soap, 9% water, and 90% air, the use of this dispenser brings economy in soap consumption—unequaled by any other method.



**The HUNTINGTON
LABORATORIES Inc.**
HUNTINGTON, INDIANA
DENVER TORONTO

WE ALSO MANUFACTURE A COMPLETE LINE OF LIQUID FLOOR SOAPS, FLOOR DRESSINGS, WAXES, DEODORANTS, PLUMBING CLEANSERS, INSECTICIDES, DISINFECTANTS, AND THE GYMNASIUM FLOOR FINISH "SEAL-O-SAN".

Personal News of School Officials

• The school board of Attica, Ind., has reorganized, with the election of Mr. JOHN T. NIXON as president; Mr. R. G. BUTLER as secretary; and Mr. J. O. MARLATT as treasurer.

• The school board of Columbus, Ind., has elected Mr. D. M. BOTTORFF as president; Mr. G. W. THOMPSON as secretary; and Mr. A. W. GOSHORN as treasurer.

• The school board of Marion, Ind., has elected Mr. HARLAN HAYES as president. W. D. MOSS was re-elected secretary, and Mrs. A. D. MOCK treasurer.

• The school board of Plymouth, Ind., has reorganized, with Mr. J. ABNER BROMAN as president; Mr. HAROLD PIFER as secretary; and Mr. A. W. THOMSON as treasurer.

• Mrs. MAE A. PATTERSON has been elected president of the school board at Gary, Ind. Mrs. Patterson is the first woman to hold the office.

• The school board of Plymouth, Ind., has reorganized, with the election of Mr. HOMER A. BUZZARD as president; Mr. L. BREEN as secretary; and Mrs. GRACE W. GRASS as treasurer.

• The school board of Linton, Ind., has elected Mr. M. W. GILBREATH, president; Mr. T. E. HARRIS, secretary; and Mr. BURL KINNAMAN, treasurer.

• Mr. HARVEY FIELD has been elected president of the school board of Nappanee, Ind.

• Mr. WILLIAM A. VIETS has been re-elected president of the school board at Vincennes, Ind.

• Mr. JOHN CIESAR, JR., has been elected president of the school board at Hammond, Ind. Mr. MICHAEL HANNON was named treasurer.

• Mr. HENRY MILLER has been re-elected president of the school board at Michigan City, Ind. Mr. E. H. UTLEY was named secretary, and Mrs. RUTH RYDSDY was appointed treasurer.

• Mr. OSCAR O. BADER has been elected president of the school board at New Albany, Ind. Mr. FRANK P. CLIPP was named secretary.

• Mr. ROBERT M. CRITCHFIELD has been elected president of the school board at Anderson, Ind. Mr. ELMER H. DOWNEY was named secretary.

• Mr. CHARLES W. BINGHAM has been elected president of the school board at Mishawaka, Ind. Mr. CHARLES A. OSTRUM was named secretary, and Mr. WILLIAM H. TUPPER was chosen treasurer.

• The school board of Muncie, Ind., has elected Mr. E. ARTHUR BALL president. Mr. F. F. McCLELLAN was named treasurer.

• The school board of Shelbyville, Ind., has elected Mr. CHARLES M. EWING president; Mr. EARL E. HAMMOND secretary; and Mr. RAYMOND SPIEGEL treasurer.

• The school board of Topeka, Kans., has elected Mr. JOHN SCOTT president; Mrs. D. L. MC EACHRON vice-president; and HERBERT ARMSTRONG clerk.

• Mr. HENRY J. BESSESEN has been elected president of the board of education of Minneapolis, Minn.

• Mr. GEORGE B. ROBINSON and Mr. PETER BROWN have been elected as new members of the school board at Hibbing, Minn.

• Mr. WILLIAM ROHRER has been elected president of the school board at Madison, S. Dak.

• Mr. JOHN LUFF has been elected president of the school board at Independence, Mo.

• Mrs. THOMAS H. SIDLEY has been elected president of the Evanston Township high school board at Evanston, Ill. Mrs. Sidley has been a member of the board for eleven years and has been vice-president for seven years.

• Mrs. C. A. WELSH and Mr. C. L. MAGUIRE have been elected as new members of the school board at Mt. Pleasant, Mich., to replace Mr. W. S. Horn and Mr. V. W. McClinic. Mr. Horn retired after six years of service, and Mr. McClinic after seven years.

• Mr. ALFRED O. ANDERSON, of Kansas City, has been appointed director of physical education and recreation in St. Louis, Mo. The position has been newly created for the coordination of the school and municipal playground systems.

• The school board at International Falls, Minn., has been reorganized, with the election of Mr. R. O. EVANS as president, Mr. C. J. HANSKA as clerk, and Mr. H. H. IHRIG as treasurer. Mr. A. R. WILSON and Mr. H. R. CLARK have been elected as new members of the board.

• Mr. WILLIAM J. MUECKLER has been elected president of the school board at Ludington, Mich. Mr. ROSCOE C. ELY was elected secretary.

• Mr. WILLIAM J. NORTON has been elected president of the school board at Granville, N. Y.

• Mr. J. L. HOOPER has been re-elected treasurer of the school board of Dist. No. 1 of Lake Mills, Wis.

• Rev. H. A. FLEER has been elected president of the school board at Port Washington, Wis. FRANK KOENEN was re-elected as secretary.

• Mr. JOHN H. EBER, member of the school board at Monroe, Mich., died in the local hospital on July 29. Mr. Eber had been a member of the board for almost twelve years and was re-elected in 1935 for a three-year term.

• The school board of Kent, Ohio, has elected two new members to fill vacancies due to death and withdrawal from the city. Mr. R. B. STRIMPLE, a former member of the board, was elected to succeed Mr. Fred H. Merrell, and Mr. O. H. MCARTOR to succeed Mr. Donald L. Gensemer. Mr. Merrell, who died at the age of 72, had been a member of the board for a number of years, and had been re-elected to serve another two-year term.

• Dr. R. A. ALLEN and CLARENCE MUSSER have been re-elected as members of the school board of Otsego, Mich.

• Mr. HARRY A. LOWE has been re-elected president of the school board at Fenton, Mich. C. J. FURLONG was elected secretary, and M. G. SANDERS was named treasurer.

• Mr. GEORGE B. DEAN has been elected president of the school board at Berrien Springs, Mich.

• Mr. JAMES T. JONES has been re-elected president of the school board at Gladstone, Mich.

• The school board of Crofton, Nebr., has reorganized, with the election of Mr. F. A. BARKER as president, Mr. J. B. SAUSER secretary, and Mr. MORRIS ANDERSON treasurer.

• The school board at Manistique, Mich., has reorganized, with the election of Mr. E. J. HASTINGS as president, Dr. A.

R. TUCKER vice-president, and Mrs. ALICE REILLY secretary-treasurer.

• Mr. BEN F. GEVER has been re-elected as president of the school board at Fort Wayne, Ind.

• The school board at Evansville, Ind., has reorganized, with the election of Mr. L. R. McCool as president, Mrs. EVALINE KANGS as secretary, and Mr. W. H. DREIER as treasurer.

• The school board at Oconto Falls, Wis., has elected EDWARD HOSTAK president, MAX BOLDT vice-president, and O. H. RICHTER secretary.

• The board of education at Moorhead, Minn., has reorganized, with the election of Mr. EDGAR E. SHARP as president, Mr. O. D. HILDE as secretary, and Mr. F. G. HILL as treasurer.

• Mr. JOSEPH W. CATHARINE, president of the board of education at Philadelphia, Pa., died at his home on August 24. He was 76 years old. Mr. Catharine had been a member of the board for 35 years.

• DR. W. D. SCHWARTZ has been elected president of the school board at Portland, Ind. Mrs. OPAL MILLER was named treasurer, and Mr. BYRON JENKINS secretary.

COMING CONVENTIONS

September 27-29. New York State Council of Superintendents, at Saranac Inn, Maine. E. L. Ackley, Johnstown, N. Y., secretary.

October 5-8. National Council on Schoolhouse Construction, at Austin, Tex. Mr. Ray L. Hamon, Peabody College, Nashville, Tenn., secretary.

October 12-16. National Association of Public-School Business Officials, at St. Louis, Mo. Mr. H. W. Crumbley, Pittsburgh, Pa., secretary.

October 15-16. Central Missouri Teachers' Association, at Warrensburg, Mo. Mr. Fred W. Urbar, Warrensburg, Mo., secretary.

October 17. Massachusetts Teachers' Federation, at Springfield, Mass. Mr. Hugh Nixon, Boston, Mass., secretary.

October 22-23. Co-operative Education Association of Virginia, at Bristol. Mr. J. H. Montgomery, Richmond, Va., secretary.

October 22-23. Indiana State Teachers' Association, at Indianapolis. Mr. Charles O. Williams, Indianapolis, secretary.

October 22-24. Michigan Education Association (Dist. No. 1), at Detroit. Mr. F. M. Stubbs, Detroit, secretary.

October 25-26. Maryland State Teachers' Association, at Baltimore. Mr. Walter H. Davis, Havre De Grace, secretary.

October 29-30. Maine Teachers' Association, at Lewiston. Mr. A. W. Gordon, Augusta, secretary.

October 30. Connecticut Teachers' Association, at Hartford and New Haven. Mr. F. E. Harrington, Hartford, secretary.

November 5-7. Colorado Education Association, at Grand Junction. Mr. W. B. Mooney, Denver, secretary.

November 5-7. High School Conference, at University of Illinois, Urbana. Mr. A. W. Clevenger, Urbana, secretary.

November 5-7. Wisconsin Education Association, at Milwaukee. Mr. O. H. Plenzke, Madison, secretary.

November 6-7. Iowa Teachers' Association, at Des Moines. Mr. Charles F. Pye, Des Moines, secretary.

November 6-7. Kansas Teachers' Association, at Topeka. Mr. F. L. Pinet, Topeka, secretary.

Modern Equipment for a Modern School



WEST
SCRANTON
HIGH
SCHOOL
Tudor R.
Williams
Architect

The West Scranton High School represents a modern school, built and equipped to function for years and years without unnecessary costs for maintenance or replacements. Natural Slate Blackboards are the choice of the Architect in this school.

Easy to write on, easy to erase, and sanitary, because Natural Slate Blackboards can be washed with water without harming its writing qualities. A pyramid Board should go into your school.

Let us send you a copy of "BLACKBOARD AND BULLETIN BOARDS"—as visual aids in education.

NATURAL SLATE BLACKBOARD COMPANY

Department D, Pen Argyl, Pennsylvania



School Administration Notes

WILL STUDY SCHOOL LIGHTING

The board of education at Joplin, Mo., has given its consent to an extensive research study in school lighting, to be undertaken by illuminating engineers, electrical research engineers, psychologists, and medical men. The group in charge will include Mr. Fred Marker, illuminating engineer of the lamp division of the General Electric Company; Mr. Alston Rodgers, electrical engineer of the Nela Park laboratories; Mr. Frank K. Moss of Nela Park; Dr. M. Luckiesh, director of lighting research at Nela Park; Dr. N. J. Sause, head of the educational-psychology department of the University of Missouri; and Dr. C. W. Howard, optometrist. Supt. E. A. Elliott, of the Joplin schools, will co-operate.

Four classrooms in the Lafayette School building have been set aside for the study. The experiment will seek to determine the effectiveness of better artificial schoolroom lighting as a means of increasing the instructional effectiveness of the schools. One classroom will be used as a control with ordinary lighting fixtures; the others will be arranged to provide constant illumination of not less than 20 foot-candles of light upon the working surfaces of all desks. The test, which is to run for two years, will involve physical examination of the pupils, intelligence and achievement tests, and complete control of instructional methods.

Mr. Alston Rodgers, one of the electrical research engineers, has made the following statement concerning the program: "We [of Nela Park laboratories] have given considerable thought to these matters, and it is our opinion that the desirability of providing improved lighting for the school and the economic justification for better lighting can be shown most effectively and authentically if we can obtain facts to demonstrate that good lighting improves the efficiency and effectiveness of the educational process, and that it tends to minimize the drain on the physical, mental, and nervous resources of students and teachers, and accomplishes these results at a reasonable cost.

"You might say that the function of a school is to prepare individuals for later life—fitting them for earning a living, benefiting society, and enjoying

life. If, in attaining these ends, the physical or mental resources of the individual are impaired, he is accordingly handicapped for the job of living and the educational process has failed to function to his best advantage.

"Obviously, all of the money spent for education is directed toward accomplishing these benefits to the individual and to society in general, and doing so as thoroughly and efficiently as possible. Now, if we can conclusively prove that the schools are 'missing fire' by some appreciable amount in attaining these ends, due to lack of consideration for lighting, we believe that the argument should be a powerful one.

"This is the most comprehensive and thorough experiment of this particular kind that has come to our attention, and it is the only one of this type in which we are affording active co-operation at the present time."

HOWELL, MICH., ANNOUNCES CHANGES IN THE SCHOOL PROGRAM

The administrative staff of the public schools of Howell, Mich., under the direction of Mr. J. S. Page, superintendent of schools, has undertaken a revision of the program of studies for the senior high school. The work was begun following careful study at a number of faculty meetings, in which teachers and principals participated. These changes have been undertaken in line with modern thought and educational principles and take into consideration the viewpoint, the needs, and the desires of students, and to a certain extent, the wishes of the people of the community in which the school is located.

In working out plans for the revision, Superintendent Page endeavored to learn the interests and viewpoints of various groups of persons, including (1) the classes comprising the student body, (2) the classes graduated from the school, (3) laymen, (4) students, and (5) patrons.

COMMERCIAL OCCUPATIONAL SURVEY OF KNOXVILLE

A commercial occupational survey of Knoxville, Tenn., has been undertaken by Mr. Harry Clark, city school superintendent, and a group of educators, as a means of helping to adjust the curriculum of the city schools to the particular needs of business and to students who will later enter business and professional life. The data will be obtained by means of a questionnaire, including information relating to the number of employees, starting salaries, requirements as to work, character, training, and personality.

It is believed the survey will prove helpful to future employers of students as well as to the students themselves. The group concerned in the survey includes Dr. Clark, Mr. W. E. Evans, principal of the high school; Mr. W. B. Bruce, investigator; Mr. Curtis Gentry, director of vocational guidance, and Joseph E. Avent, of the school of education of the State University.

The questionnaire asks the co-operation of the employer in connection with the working out of a satisfactory plan through which business students may have an opportunity to get actual business experience on the job while pursuing their commercial training. The work is to be of a part-time character, providing for from one to two hours' employment during the school day, or part-time work after school, or work on Saturdays and holidays.

NEW LIBRARY SERVICE IN UNITED STATES OFFICE OF EDUCATION

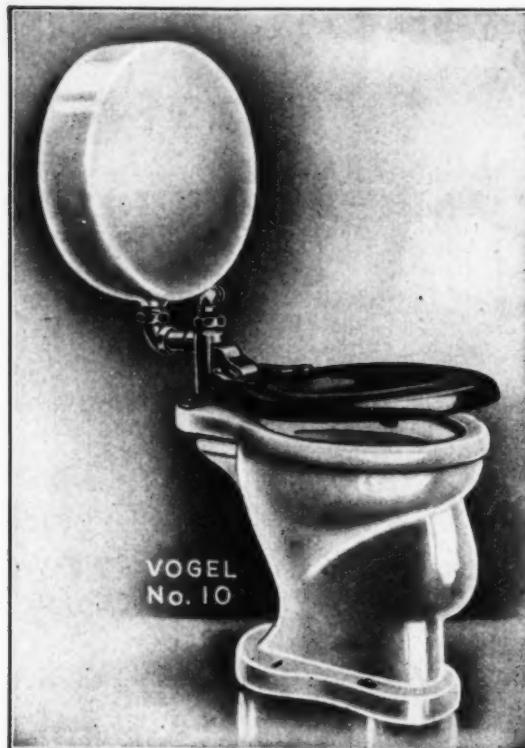
Fostering the development of public and school-library service in the United States will be one of the major activities of the Federal Government's new library department in the Office of Education. In an announcement, issued by Hon. John W. Studebaker, Commissioner of Education, the services of the new department will include (1) the making of surveys, studies, investigations, and reports regarding school, college, university, and other libraries; (2) the co-ordination of library service with other forms of adult education; (3) the development of library participation in federal projects; and (4) the fostering of nation-wide co-operation of research materials among the more scholarly libraries, and the development of public, school, and other library service throughout the country.

The work of the federal library-service division will be financed with an appropriation of \$25,000 for the fiscal year 1936-37. The action of the Office of Education is of special significance. It means that for the first time a federal office has been made specifically responsible for fostering a national program of library development.

NEW YORK SCHOOL REGISTRATION

Registration in the elementary schools of New York City, which has been going downward by nearly 50,000 in the past ten years, is due for an even sharper decline, it is indicated in a report prepared for the board of education by the budget committee.

For the first time in history of the school system, the report shows, the size of the graduating class exceeds that of the incoming primary class. The result



Vogel Number Ten — The durable, economical seat action closet, for installation in schools, institutions, comfort stations and public and semi-public places.

Sold by Plumbers everywhere.

Ask your plumber about the satisfactory service of **VOGEL** school closets...

These closets are noted for long wearing qualities and efficient operation. Fewer repairs and fewer adjustments are required. **VOGEL** Number Ten closets are installed in schools in all parts of the country. Many installations run as high as 50 or 60 outfits, and we have unsolicited letters from school superintendents telling us how satisfactorily these closets operate. Ask your plumber about **VOGEL** Number Ten school closets: he'll tell you they are the most efficient—durable—and economical closets you can install.

JOSEPH A. VOGEL CO., Wilmington, Del., St. Louis, Mo.

VOGEL Products

will be a double loss in school population. At present, larger classes are being graduated and are being replaced at the other end by smaller entering classes. A total of 91,117 children are now registered in the eighth year, while the first year has 85,513. The drop became noticeable in the lower grades as early as 1926. In 1930, the total registration began to go down, and since that time there has been a net loss of 47,406. During the next year it is anticipated that there will be a further loss of 16,000. The number of teachers, however, is not being reduced.

♦ Columbus, Ohio. The board of education has approved the appointment of 1,400 teachers, principals, and other school officials on a ten-month basis, beginning with September 7, with a provision in the contract that if funds are not available to complete the school year, one-twentieth of a month's pay will be deducted for each school day the year is shortened. Salaries of teachers next year will be in accordance with the schedule now in effect and approved by the board, payable in ten installments, or as funds are available.

CONVENTION OF COUNCIL ON SCHOOL-HOUSE CONSTRUCTION

Mr. J. Fred Horn, of the Texas State Department of Education, has announced that the convention of the National Council on Schoolhouse Construction will hold its sessions at the Driskill Hotel, Austin, Texas, October 6 to 9. Dr. Ray L. Hamon, secretary of the council, is completing the program arrangements, which will include reports on various aspects of the standardization of planning and construction of school buildings.

SCHOOL REVENUES FROM BEER

According to figures issued by the National Society of Manufacturers and Distributors, Washington, an agency of the organized brewing industry, a number of the states have received large sums from licenses and excise taxes on the manufacture and sale of beer.

According to the Institute, the following states have applied sums as follows: Arkansas, \$119,663.44; Georgia, \$237,000; Idaho, \$116,249.95; Indiana, \$406,600.27; Michigan, \$700,000; Missouri, \$275,751.25; Nevada, \$124,000; New Mexico, \$266,924.96; Oklahoma, \$673,183.84; South Carolina, \$300,000; Tennessee, \$270,368.02; Texas, \$277,974; Washington, \$355,843.19; Wisconsin, \$150,000.

Louisiana allocates its beer and liquor revenue to schools and charitable institutions which makes no distinction in its accounting. In 1935, this revenue amounted to \$630,251.55.

It is estimated that approximately one and one-half million dollars annually from alcoholic beverages were used in Florida for the state school system.

ADOPT FEES FOR USE OF SCHOOL BUILDINGS

The board of education of Ann Arbor, Mich., has adopted a schedule of fees to be charged for the use of the high-school auditorium. The fees, which cover three kinds of service, are as follows: When the stage is used by school organizations, the charge for the first performance is \$20, and for the second performance \$10; when used by outside organizations, the charge for the first performance is \$35, for the second performance \$25, and for rehearsal \$5 for each performance; when the stage is not used, school organizations will be charged \$7.50, and outside organizations \$15; printing of tickets for reserved seats cost \$2, and the use of the motion-picture machine cost \$5.

NEW RULES FOR THE USE OF SCHOOL BUILDINGS

The board of education of Greenwood, Ind., has adopted new rules for the use of school buildings by outside organizations. It is the belief of the board that a definite schedule of charges should be made and adhered to in order to maintain the gymnasium floor, the stage equipment, and the home-economics equipment. The following regulations have been adopted to govern the use of such equipment:

"Any school or nonschool organization which uses the building for a function for which a charge is made shall contribute 10 per cent of the gross proceeds to the treasurer of the Greenwood High School Activities Fund.

"Any nonschool organization which uses the building for a function for which no charge is made shall pay a minimum fee of \$5 for use of the auditorium, or \$2.50 for use of the basement community room or the assembly hall, or \$5 for the use of the home-economics equipment with either the basement community room or assembly hall. If the home-economics equipment is used with the auditorium, an additional \$2.50 charge will be made for the use of the home-economics equipment. If the groups are large the price will be scaled higher.

"If the gymnasium is rented for practices or games the charge will be \$2 per two-hour practice and \$5 per public game.

"The charges are due and payable at the time of the function.

"It is expected that any organization using the home-economics equipment will wash the dishes and utensils and endeavor to leave equipment generally in as clean a condition as before use.

"It is expected that any organization using the home-economics equipment will be responsible for excess breakage.

"It is expected that any outside equipment will be removed immediately after a function. The school is not to be held responsible for equipment left longer than 24 hours after any function.

"Each organization is expected to furnish its own police service if needed.

"Applications for use of the building by nonschool organizations must be made to the members of the school board. If permission is granted the date for the function will be sanctioned and recorded by the superintendent. School organizations must make application for use of the building to the superintendent.

"Ordinary janitor service — placing tarpaulins, placing chairs, placing dining tables, sweeping, locking up — must be furnished by the school janitor at no extra charge. Excessive janitor service will be at extra cost.

"The school janitor or janitors will be paid by the school board for nonschool functions at a rate to be decided by the board when the bill is filed in the spring.

"In the Activities Fund Bookkeeping the money derived for use of the home-economics equipment will be credited to the home-economics fund. The remainder will be credited to the general fund. The funds will only be used for maintenance and for the purchase of new equipment for the above-mentioned auditorium, stage, basement community room, and home-economics rooms.

"The P.T.A., the Boy Scouts, and the Camp Fire Girls are considered school organizations in the above regulations.

"Possible exceptions which cannot be encompassed by the above regulations may require special consideration. An example would be the annual Tri-Kappa Christmas party for the poor children for which no charge is made."

APPRECIATING THE TEACHER

The finest statements of appreciation of the scholarship and service of teachers has come from the superintendents of schools. In discussing the work of the teachers who have made the school year 1935-36 successful, Dr. Allen S. Martin has reported as follows to the board of education:

"The teaching corps for the school year 1935-36 comprised 81 principals and teachers. Fifty-seven of these have academic and professional training of four years beyond a standard four-year high school. They are graduates from 33 different colleges and universities.

"The evaluation of the merits of a teacher involves a number of important considerations — the intangible influence of the teacher for character, ideals, and ambition; large knowledge of the native ability, and the social inheritance of the pupil; and an accurate measure of the pupil's progress in the subject matter.

"It is my opinion that the teaching corps of Haddonfield ranks among the very best in scholarship and teaching ability. Concrete evidence was submitted to this board on several occasions that was indicative that the elementary schools of Haddonfield rank among the very best also. I refer particularly to the eighth-grade examinations by the state department.

ANNOUNCING

GOLD DUST
IN 25 AND 50 LB.
SIZES FOR
INDUSTRIAL USE

**Cut cleaning costs with
 this labor-saving cleaner**

Here's a way to cut down on cleaning costs. Standardize on Gold Dust—the one cleaner that does every cleaning job! Floors—walls—windows—painted woodwork—porcelain...whatever needs cleaning can be made bright and shining with Gold Dust. It does more work, quicker and better, than ordinary cleaners. And tests prove that Gold Dust costs less *per job*.

Try Gold Dust at our expense. Mail the coupon today for a trial size package—free. Put it to any test you want in your own plant, in competition with the cleaner you are now using. Judge for yourself on the basis of results.

If your dealer cannot supply you with industrial size drums, order direct from Gold Dust Corporation, 88 Lexington Avenue, New York City.

GOLD DUST
KILLS ODORS AS IT CLEANS



SEND FOR FREE SAMPLE

GOLD DUST CORPORATION
 88 Lexington Avenue, New York City
 Please send me by return mail, without cost or
 obligation, a *free* sample of Gold Dust for trial.

Name
 Company
 Address
 City State



IS SCHOOL READY FOR THEM?



Getting ready for school is not limited to the youngsters or their parents. More important is the question, "Is school ready for them?"

There's still time to make sure the answer is "yes" in that all-important department of school maintenance—floors.

Speed is one of the big advantages of the FINNELL Electric Polisher-Scrubber. Speed in its results is a great advantage of Gloss Seal—the FINNELL traffic resisting treatment for school floors.

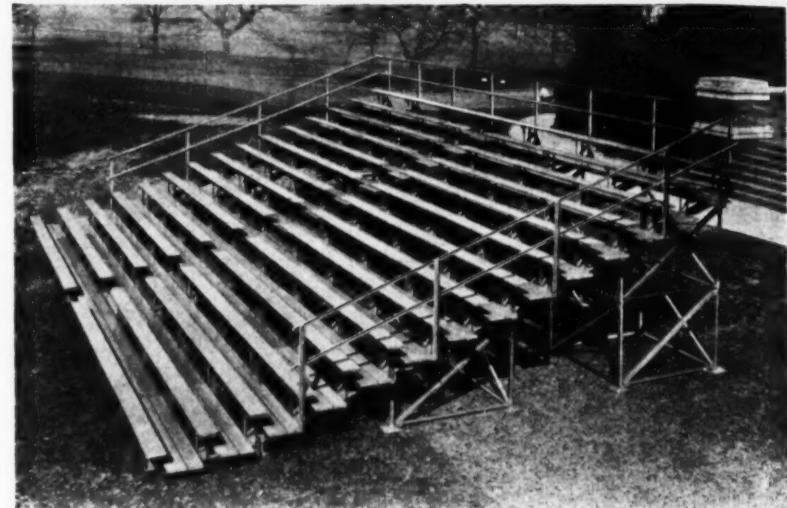
Gloss Seal comes in three grades,—a right type for every school floor. FINNELL machines in many sizes and models. Interchangeable brush ring reduces the larger models to units having 11 or 13-inch brush rings,—a tremendous advantage in smaller schools.

Available on short notice is the service of our expert floor engineers. Each is qualified to counsel with you on all questions of floor treatment and floor maintenance.

Yes, there is still time to have your floors ready for school. You can make it easier and less expensive to maintain them during the school year . . . and less costly to recondition them next year.

May we help you? Write fully and freely (no obligation) to FINNELL SYSTEM, Inc., 809 East Street, Elkhart, Indiana.

**FINNELL SYSTEM
OF FLOOR MAINTENANCE**



INSTALL A SAFE GRANDSTAND This Fall!

Safety of spectators . . . is a factor above the consideration of money. Bear this in mind when you consider a grandstand . . . "THERE HAS NEVER BEEN AN ACCIDENT ATTRIBUTED TO A WAYNE GRANDSTAND."

BOOKINGS NOW FOR FALL DELIVERY.

SEND FOR LITERATURE ON ALL TYPES . . . OUTDOORS AND INDOORS.

WAYNE STEEL GRANDSTANDS

PORTABLE

SEMI-PORTABLE

PERMANENT

WAYNE IRON WORKS

Wayne, Penna.

VUL-COT
-the National Wastebasket
Guaranteed 5 years

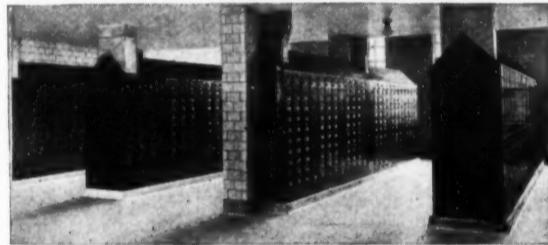


SUPER-STRONG, DOUBLE-ROLLED FIBRE TOP!

NO METAL TOPS to dent, bend, corrode or scratch. For wastebaskets that look better—and last longer—85 per cent of schools in America have standardized on Vul-Cot. Constructed throughout of National H-A-R-D Vulcanized Fibre. NO SOFT FIBRE. Will not crack, split or splinter. In sizes and shapes to meet all classroom needs.

NATIONAL VULCANIZED FIBRE CO.
WILMINGTON, DELAWARE

BERLOY STEEL LOCKERS Have Been Installed in Over 50 Thousand Separate Institutions...



• Berloy Lockers in Pierre S. Du Pont High School, Wilmington, Del.

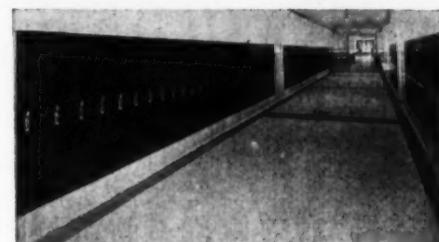
FITTING PROOF OF THEIR QUALITY, VALUE, AND DEPENDABILITY IN HEAVY SERVICE

• Berloy Steel Lockers are built for a lifetime of service. Experienced buyers of school equipment select Berloy Steel Lockers because they offer the utmost in all the essential qualities that assure long-time economy—compactness, utility, protection of contents, and durability beyond the life of the school building itself.

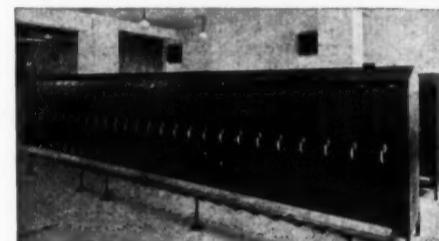
Back of Berloy Steel Lockers is a half century of metal-craft experience, plus unequalled manufacturing facilities. Regardless of your requirements, there is a type of Berloy Steel Locker that will meet your needs exactly, and give you every feature you demand. For accurate and economical planning of any kind of locker installation, write or wire, and an experienced Berloy engineer will be placed at your disposal.

THE BERGER MANUFACTURING CO. • CANTON, OHIO
Division of REPUBLIC STEEL CORPORATION

STEEL OFFICE EQUIPMENT—Lockers • Wardrobe Cabinets
Storage Cabinets • Book Shelves • Steel Desks • Desk Cabinets
Letter Files • Card Cases



• Berloy Lockers in Junior-Senior High School, Bradford, Pa.



• Berloy Lockers in Second and Lee Streets School, Louisville, Ky.



• Berloy Lockers in West Orange High School, West Orange, N. J.

The Efficient School-Board Member

At a gathering of 300 school-board members and executives of Bergen County, New York, held at Englewood, Dr. Willard Elsree said:

"There is no group of public officials in America who have contributed more of their time and effort gratuitously to the welfare of citizens than the half-million school-board members who direct the educational machinery of some 150,000 school districts. The size of their tasks is overwhelming. They employ over a million school teachers and tens of thousands of other workers, including janitors, engineers, bus drivers, and maintenance men. The welfare of over 25 million boys and girls is entrusted to their guardianship. School boards spend over two billion dollars annually on the enterprise. The business they handle is one of the six largest projects in the United States."

"There are many board members who would say: 'I am responsible to the political party which elected me to office,' or 'I am responsible to a religious or social group,' while still a third would say: 'I am responsible to the taxpayers, and to the children.' A correct answer, however, would be: 'I am responsible to the taxpayers, to the children and to the State.'

What Is the Real Job of the Board?

"In the early American days, the duty of the board of education was to administer the school. Rapid expansion and departmentalization of the school system have led the modern board of education to select a trained school administrator and hold him responsible for carrying out their educational program. The boards can then concentrate their attention on the establishment of policies. The board thus becomes a legislative body, which sets up the objectives and the conditions under which the school must operate. It leaves to the superintendent and the professional staff, the carrying out of the policies the board has agreed upon."

"After a board has selected a good administrator, he should be given an opportunity to analyze the educational policies of the school, make recommendations for improvements, select the personnel, and organize the curricula. The school system will then be run on a more efficient basis."

"As an individual, the board member has no authority whatever. In conjunction with the rest of the

group, he may make decisions and exercise authority, but by himself, away from the others he has no more power in school matters than any other citizen. The single exception to this is where the board has formally and specifically delegated a particular duty to one of its members."

"All members should act as a whole on policies. Policies should be discussed at board meetings. The fusion of individual opinions and ideas is the most valuable feature of board control. No member should pledge himself to serve any group or any proposition. All decisions should be arrived at jointly in a board meeting."

Relationship Of Board To Instructional Personnel?

"For school-board members to be on friendly terms with principals and teachers is in itself commendable. There are innumerable instances, however, of trouble arising from the fact that individual school-board members have permitted their professional opinions to be altered by personal friendships with subordinate employees in the schools. They have allowed faculty members to consult them privately, and discuss plans which should have been presented by the supervising principal or superintendent. The proper procedure would be for the faculty member or school nurse or physician to consult the supervising principal, who in turn would present the matter to the board."

"A teachers' organization provides the best medium for contacts with the local board of education. The board should designate a time for teachers to come before the group. At least twice a year, this body should have a definite part in board meetings, and have an opportunity to express freely their recommendations for the improvement of education in the community."

Why Have Written Rules and Regulations?

"The duties and responsibilities of school officials should be clearly defined. The preparation of rules and regulations is a long and arduous task but once accomplished, this document will save hours of explanation to inquiring citizens as well as employees of the board. If it is comprehensive in character, it will provide board members themselves with accurate information with which they should be armed if they are to maintain leadership in the community."

"In conclusion, it is my opinion that a deep under-

standing of the purpose and functions of the school board will go a long way toward equipping its members for the handling of their tasks."

School Board News

♦ Brazil, Ind., has two school boards on its hands and doesn't know how to get out of the tangle. Two members presented their credentials as new members of the board, one a Republican appointed by the mayor, another a Democrat appointed by the city council. Each attempted to seat the member representing his party, resulting in a tie vote. Then one faction elected a president, secretary, and treasurer. The opposition did likewise, with the result that the city has two school boards. The legal contention will hinge upon the relative authority of the mayor and the city council to make board-member appointments.

♦ The superintendent's office of the New York City schools recently furnished a list of 5,000 truants and near-truants to the Crime Prevention Bureau of the police department in connection with a newly established Police Athletic League, designed to promote healthful leisure-time activities among children. The list was given out on the solemn promise that it would be used for no other purpose than to promote interest in leisure-time activities. The list was shrouded in secret due to the fear that the children would be injured and that a few would get the idea that they are "big shots" and miniature public enemies.

♦ Shelton, Conn. At the suggestion of the state education department, the school board has approved a proposal to abandon the Cambridge plan during the 1936-37 school year. The Cambridge plan would oblige the schools to operate until June 25, 1937, to complete 180 days, and would make no provision for emergency school closing.

♦ Pekin, Ind. A complete commercial course will be offered in the high school during the next school year.

♦ Peoria, Ill. A project of reconditioning the school textbooks has been completed by the school board. Between 3,000 and 4,000 books are reconditioned annually, at a saving of \$2,000 a year to the city. The work was carried out by two women employees, under the direction of Mr. R. E. Paine, and included the

In the Interest of ECONOMY . . .
as well as Educative EXCELLENCE
SCHOOL EXECUTIVES FIND

CRAYOLA *Colored* **WAX CRAYON**

PRODUCES GOOD RESULTS



Crayola lasts longer . . . wears down smoothly . . . does not bend in the warmth of the hand. Its use for over 30 years has been of definite value in raising the standard of schoolroom art projects. Younger pupils find Crayola easy to use because it goes on softly, does not smudge. Older students enjoy using Crayola because its colors and texture respond quickly to desired effects.

Crayola and An-du-septic Dustless Crayon are Gold Medal Products for schoolroom and home use.

Manufactured only by

BINNEY & SMITH CO., Room 1900J, 41 East 42nd St., New York

Crayola is sold everywhere in boxes containing 6, 8, 12, 16 or 24 assorted colors. For extensive work there are over 50 beautiful true colors available.

The famous Gold Medal Products also include Perma Pressed Crayon, Artista Water Colors, Artista Tempera Colors, Clayola Modeling Material, Artista Frescol, Shaw Finger Paints.

repair of torn pages, the affixing of new bindings, and the replacing of missing pages.

♦ Belmont, Mass. The board of education has adopted a new set of rules governing the use of school buildings for other than school purposes. The rules contain provisions relating to conditions of use, charges for use, agencies entitled to use the buildings, and the character of activities to be promoted. The rules require that a charge of \$5 shall be made for the use of grade-school assembly rooms, and \$10 for junior and senior halls.

The California State Board of Teachers Retirement has retired 208 teachers this summer. On completion of thirty years' service they will receive \$600 annually. One teacher has a record of having served sixty years.

♦ The board of education of Waltham, Mass., has completed a revision of the arithmetic curriculum, which will be used for the first time during the new school year. The work of revision was carried out by committees of grade teachers.

♦ Otsego, Mich. The school board has voted to provide increased opportunities in the course of study for students who will not go on to college.

♦ Bangor, Me. A special committee, with Mr. Russell I. Morgrage as chairman, has been appointed to undertake the preparation of a new course of study in safety education for the kindergarten and elementary grades.

♦ School children in Tennessee, during the next five years, will have nothing in their textbooks about evolution, due to the elimination of this subject. Recently, when the State Textbook Commission adopted a new list of books, only one of a score of science texts even mentioned the word. The books chosen present scientific facts but advance no particular theories.

FINANCE AND TAXATION

♦ Milwaukee, Wis. Dr. W. W. Theisen, assistant superintendent of schools, has presented to the finance committee of the school board, a budget of \$7,604,207 for the school year 1936-37. The budget represents a reduction of \$95,413 below the estimate for 1935-36. It includes an anticipated surplus of \$264,423 from last year's budget and a contingent fund of \$12,000.

♦ The Minnesota State Board of Education has authorized the immediate distribution of \$2,219,238 in state and federal aid to the schools of the state. Of the total amount, the principal item was \$1,870,395 for tuition of nonresident pupils at the rate of \$7 monthly for a nine months' term.

♦ Newark, N. J. The school board closed the 1935-36 school year with a surplus of \$69,568, according

to a report of Mr. Alfred H. Krick, secretary of the board. Due to a threatened deficit of \$129,043 in school funds, the board was compelled to reduce its expenditures to offset the shortage. Not only was the amount covered, but the board was able to show an excess balance of \$69,568.

♦ Wilmette, Ill. The school board has adopted a tax levy of \$300,000 for the school year 1936, which is a reduction of \$20,000 from the estimate of \$320,000 in 1935. Of the total amount, \$225,000 will be used for educational purposes, and \$75,000 for building maintenance.

♦ Wheeling, W. Va. The Ohio county board of education has adopted a budget of \$944,709 for the school year 1936-37. The bond and debt levy fund will reach \$78,189, and the expenditure for library purposes will be \$23,892.

♦ The New Trier Township high-school board, at

Highland Park, Ill., has adopted a tax levy of \$610,000

for the year 1936-37, which is a reduction of nearly

\$80,000 from the estimate of 1935-36.

♦ The state tax commissioner of Minnesota, Mr. G. E. Wallace, has reported that increased state-income-tax payments will permit the payment of \$9.50 per pupil in special aid this year. To date, \$2,502,348 has been released for special school aid at an average of \$6.15 per pupil.

♦ In a bond issue of \$1,350,000, the Fort Worth, Tex., board of education inserted a clause, which provided that the issue would be callable at the expiration of three years. When it was pointed out that long-term bonds, without the option to redeem, would command a better market the clause was stricken out.

♦ Davenport, Iowa. The board of education has adopted a budget of \$943,605 for the school year 1936-37. The new budget calls for \$775,000 for the general fund; \$112,605 for the school-building fund; \$6,000 for the teachers' pension fund; and \$50,000 for the emergency fund.

♦ Topeka, Kans. The board of education has approved a budget of \$1,356,791 for the school year 1936-37.

♦ Chattanooga, Tenn. The city commission has approved an ordinance, proposed by Mr. T. H. McMillan, calling for the establishment of a laboratory and training school for teachers, to be sponsored jointly by the city department of education and the University of Chattanooga. The project will be put in operation as soon as a suitable building can be obtained for training purposes.

♦ Waukesha, Wis. The board of education has approved a recommendation of the teachers' com-

mittee, calling for the readoption of the salary schedule for teachers in effect previous to the depression period. The action of the board does not increase the salaries received by teachers during the past year, but is in effect a delayed approval on the action of the group a year ago, which restored the 5-per-cent pay cuts taken by teachers during the depression. The cost of immediately restoring salaries to top levels in one year, it was estimated, would reach \$10,000.

♦ El Paso, Tex. Teachers in the city schools will receive second \$20,000 salary increase, making a total of \$40,000 distributed in the form of a bonus. The payment represents money left over as the result of an increase in the state per capita allotment from \$17.50 to \$18.50. Under the plan, 600 teachers will receive \$33 extra in September, 1936, and an equal amount the following September.

♦ LaSalle, Ill. The school board has passed a resolution, restoring the 15-per-cent salary cuts, which teachers and school employees received in May, 1931.

♦ Wakefield, Mich. The salary schedule for the teaching staff has been revised to provide for a longer period of annual salary increments. Under the revised schedule, a beginner will start at a salary of \$1,200 and will receive an annual increase of \$50 over a period of ten years.

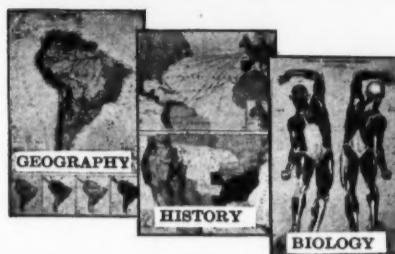
♦ Otsego, Mich. A bonus of 20 per cent in salary was paid to teachers on the school staff, under an order of the board of education at the close of the last school year. Salaries of teachers were adjusted for the next year, with a minimum of another 20 per cent beyond the bonus of last year.

RULES AND REGULATIONS

♦ The board of education of Springfield, Ohio, has adopted a resolution whereby only bona fide residents of Clark County are eligible for teacher positions. Those who have been in the service for a year are exempt from the rule.

♦ Neenah, Wis. The school board has adopted a set of rules and regulations for the government of the schools. Under the rules, the committee on teachers and textbooks will act in an advisory capacity with the superintendent on all matters relative to teachers and textbooks, and any other matters that may be referred to it from time to time. In the matter of filling vacancies in the teaching staff, the superintendent will recommend teachers to the teachers' committee for their approval, and the committee will in turn recommend to the board the election of approved teachers.

NYSTROM



GEOGRAPHY For the elementary grades Nystrom offers a wide choice of simplified political, physical-political and regional type maps. Maps of the United States and World—large, simple and brightly colored—for beginners are now ready. For junior and senior high schools special series of economic maps of both United States and World are available.

HISTORY The Sanford-Gordy American History Series include the Old World Background. The 45 maps in the Webster-Knowlton-Hazen Series constitute the most comprehensive set of European and World History maps. Choice of three backings and eleven mountings. Historical pictures and Wilgus Directed History Problems and Projects supplement the maps and texts.

BIOLOGY The biology section of our new C36 catalog lists a complete line for all biological sciences. Here are charts for every grade of work from the more simple ones for elementary physiology, hygiene, botany, zoology, to the most technical anatomical forms.



A. J. NYSTROM & Co.

3333 Elston Avenue Chicago, Illinois A6

KIMBALL BUILT

LABORATORY • VOCATIONAL • LIBRARY FURNITURE



Let the Kimball engineers help solve your problem in the laboratories and vocational departments. Kimball furniture is designed and constructed to afford the greatest service. The features of adaptability and practability in Kimball equipment offers an economical solution to your difficulties, and assures you of higher utility values.

Write and also ask for a copy of our complete illustrated catalog.

W. W. Kimball Co.

Laboratory and Vocational Furniture Division

306 South Wabash Ave. Chicago, Ill.

A. E. KALTENBRUN Director of Sales

New York Sales Offices 105 W. 40th Street, New York

New England Sales Office 716 Columbus Ave., Boston, Mass.

Our complete catalog lists all styles and sizes of space-saving equipment. A copy is yours for the asking. Send for it now.

KIMBALL
CHICAGO

LABORATORY
AND VOCATIONAL
FURNITURE

IRWIN



Scientific design is aided by fine construction so that unusual quality is long lasting

Take No. 164, for example. Its practical fashioning can be seen at a glance . . . how it influences correct posture, at the same time being compact and clean cut.

But to get the low-down on the way it's made we up-end it . . . as we have done in the phantom illustration below. There is shown how the falling and slamming of lids is prevented—by means of reinforcing splines connected to heavy gauge hinges adjustable for proper tension.

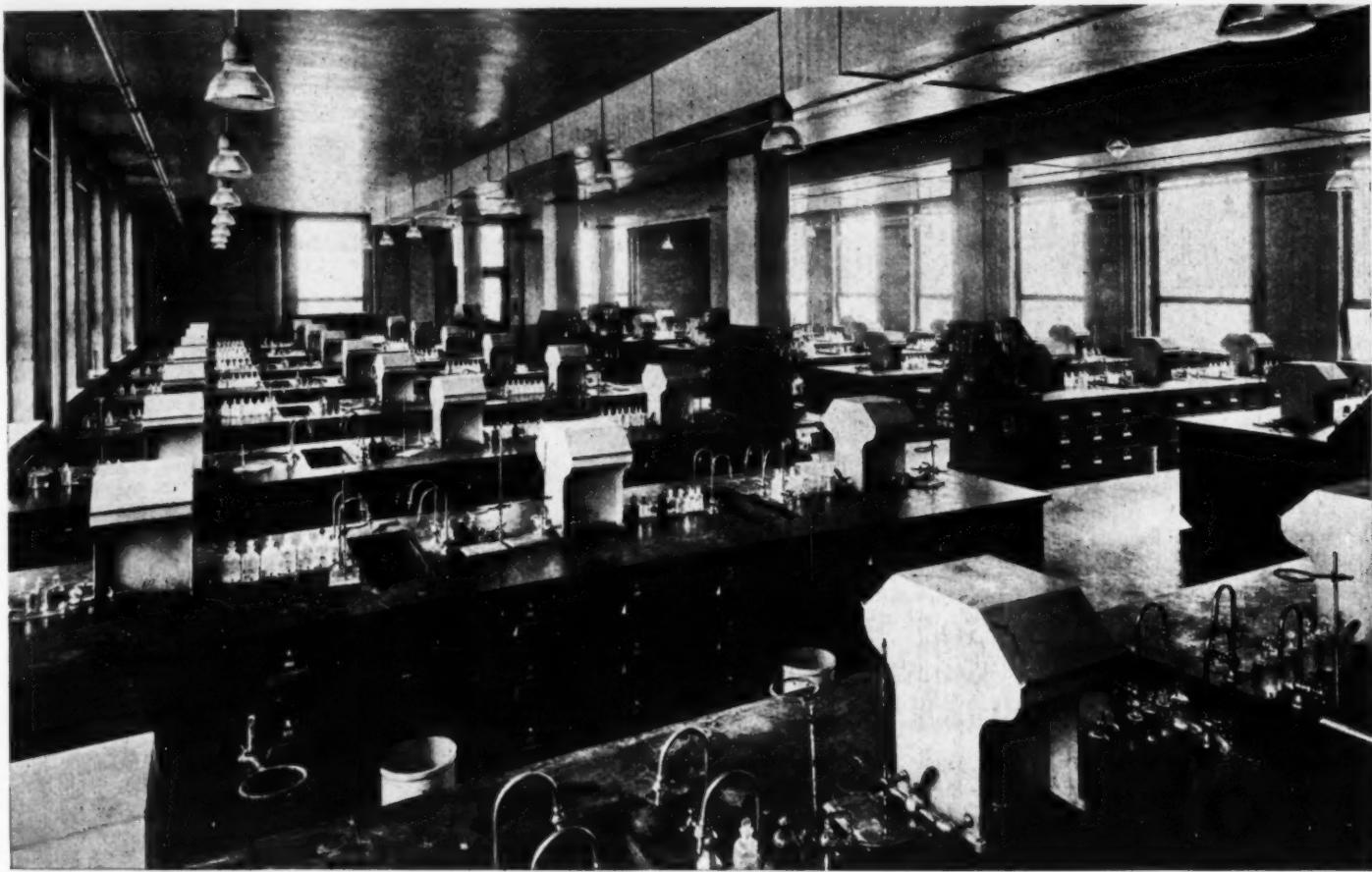
Shown, also, is the "plus and minus" feature in the lower frame, which has two values: one, for adjusting the distance from bookbox to chair; the other, for compensating for floor unevenness. This is typical of Irwin carefulness to the things that safeguard the seating investment. It indicates that no matter what type of seating is supplied—for kindergarten, classroom or auditorium—there is the same thoughtful planning for permanence along with the more visible superiorities.

And of equal interest—especially where appropriations are limited—is the fact that every one of the many Irwin pieces—is priced right. Ask for the new Irwin catalog—No. 36.

IRWIN Seating Company
Grand Rapids, Michigan

Seating Specialists for over a Quarter Century
NEW YORK OFFICE: 381 FOURTH AVENUE
TERRITORIAL DISTRIBUTORS: THROUGHOUT U. S. A.





This illustration shows only one of a number of Walrus laboratory furniture installations in a single building of a large university. Your name and address written on the margin of this advertisement, will bring more information. Just clip and mail.

WALRUS MFG. CO.



DECATUR, ILLINOIS



EVANS
"Vanishing Door"
WARDROBE

Class J

equipped with either "Floor" type (as illustrated) or "Jamb" type hinges. This is Class D wardrobe if made with flush doors.

CLASSROOM WARDROBES
High in Quality — Low in Cost

This type occupies a recess flush with the wall. Plaster back and ends. No partitions, but with mullions between pairs of doors. Wire mesh ceiling. Blackboards if required.

The "Vanishing Door" hinges on which the doors are hung are made with double pivoted arms and swing the doors back into the wardrobe entirely out of the way. Simple—trouble-proof—and last as long as the building.

Wardrobes are furnished complete in the knock-down, with all woodwork cut to size, and only need to be nailed in place. The hinges are easier to put on than common butt hinges. The cost of installation is small.

We make many other types of school wardrobes, fully illustrated and described in Catalog "N." Send for your copy.

W. L. EVANS
WASHINGTON, INDIANA, U.S.A.



Model 25
ANIMATOPHONE

READY for OPERATION on either DC or AC (any cycle)
A Master for performance—yet lowest priced, \$360
smallest, most compact and complete of
QUALITY SOUND PROJECTORS

These and other invaluable features can only be had in Victor Equipment.
AUTOMATIC SAFETY TRIP for positive prevention of film damage during "loss of loop" and
other emergencies. Praised by film libraries everywhere! SUPER SOUND SYSTEM with
keyed-in-position parts that a child can quickly remove, CLEAN and replace . . . for perfect per-
formance always.
SUPER HI-POWER ILLUMINATION with QUIET, SPIRA-DRAFT VENTILATION that in-
creases lamp LIFE and EFFICIENCY.

VICTOR ANIMATOGRAPH CORP., DAVENPORT, IOWA



**OLD FAITHFUL
TUNED PALET
COLOR PRODUCTS**

THE U.S. POST OFFICE

Tune in on the 'TUNED PALET!'

SYNCHRONIZE JOYFUL CREATIVE EXPRESSION
and PRACTICAL COLOR KNOWLEDGE

If you want perfect color harmonies in your art class projects, then be sure to requisition Tuned Palet Art Mediums. These brilliant mediums are "tuned" to each other - they make your color work easier and more beautiful.

• If you do not have a copy of the booklet "Color" send for yours today - Full of valuable ideas - free!

THE AMERICAN CRAYON COMPANY
541-641 HAYES AVENUE, SANDUSKY, OHIO

200 FIFTH AVENUE, NEW YORK



THESE LINES OF
"OLD FAITHFUL"
PRODUCTS
ARE
CARRIED
IN
STOCK
BY
ALL
LEADING
SCHOOL
SUPPLY
HOUSES

• • •

PLACE
ORDERS
NOW
WITH YOUR
NEAREST
DISTRIBUTOR
TO INSURE
PROMPT
DELIVERY
FOR
SCHOOL
OPENING



HYGIEIA DUSTLESS



WALTHAM SOFT



AMBRITE COLORED



PERMEX WRITING FLUID

Book News

Federal Support for Public Education

By Paul R. Mort. Cloth, 334 pages. Published by Teachers College, Columbia University, New York City.

This volume constitutes a report of an investigation of the educational need and relative ability of the states to support their schools and the expediency of federal support for the states in order to equalize educational opportunity throughout the nation. A research staff of eight members, headed by Paul R. Mort, prepared the study.

This study proceeds upon the thought that there are many sections throughout the United States where the schools for lack of adequate financial support do not measure up to acceptable standards. It argues that federal support must be secured if equality of educational opportunity is to be afforded.

After pointing out that the federal government in the earlier grant of lands for educational purposes had committed itself to a policy, the study notes that while most of these grants were attended with specific controls, several of them were unconditionally made. The argument is here set forth that these latter grants stand as a clear-cut controversion of the old maxim that control follows the dollar. The volume then devotes considerable space to the measures of educational need in the several states and to a defensible foundation program for the schools of the United States.

On the controversial question of federal support and federal control, the compilers of the report quote the opinion of the National Advisory Committee on Education, appointed by President Hoover in 1929, as follows: "Our long experience shows that general federal grants do not tend to interfere with our essentially American method of keeping the educational management as close to the people as consistent with effective service. The widely current notion that control of education always follows any and all types of financial grants is not verified by experience; this false generalization arises from our comparatively recent federal attempts to stimulate and standardize special types of education in the state through money rewards and deprivations. Federal control followed, not from financial aid as a major purpose but from its

use as an instrument for enforcing certain specific educational policies and methods in the states."

The contrary viewpoint is expressed by President Hutchins, of the Chicago University, who says: "I beg to suggest with deference that you are fighting a useless battle; the federal government never has given and never will give money for the support of education, without influencing the educational situation in the political unit to which the money is granted. The grants by the Emergency Relief Administration for support of college education during the depression have had an effect on standards of admission and retention of students throughout the country. This is simply the most recent illustration of the fact that influence of some sort must accompany grants of any substantial sum of money."

Several chapters dealing with the subject of taxation are presented. Here the investigators discuss principles in taxation and the several forms employed in securing public revenue. They also give attention to the measure of ability to pay taxes, and the yield of a modern tax system.

The plan proposed provides for a federal appropriation of three billion dollars. Sixty-four per cent, or \$190,000,000, is to be distributed to the states and territories on the basis of \$6 per weighted pupil. Aid over and above the \$6 per weighted pupil is to be granted to the least able states to the extent of \$15 per weighted pupil. A guarantee of 20 per cent of the ultimate federal aid is to be made where the exigencies of the situation warrant.

The document is a timely one and deserves the attention of student and statesman, who are concerned in the maintenance of high standards in America's system of popular education.

Show Me How to Write (In Manuscript)

By Edith Underwood Conard. Book I, 32 pages, 10 cents. Book II, 48 pages, 10 cents. The A. N. Palmer Co., New York, N. Y.

Manuscript writing is used in many schools as a successful solution of the handwriting problem in the primary grades. It is found that the alphabet, based upon straight lines, is much easier for young children than ordinary penmanship and correlates better with reading.

Book I is intended for beginners (5 to 7 years), and introduces the child to the common words he will learn first. Book II (ages 7 to 9), contains thirteen pages of advanced pictures and more words. A teacher's guide provides the teaching technique.

Good English Through Practice

By Edward H. Webster and John E. Warriner. Book One. Cloth, 224 pages, 72 cents. Book Two. Cloth, 224 pages, 72 cents. Book Three. Cloth, 208 pages, 72 cents. World Book Company, Yonkers, N. Y.

These authors have been remarkably successful in organizing a course in English for grades seven to nine which presents the subject matter concretely and appealingly. There is no padding. Essentials are stressed and plenty of drills and exercises are provided together with diagnostic and achievement tests. A teacher's manual gives the key to the tests. Pupils can understand this course.

The Local Unit for School Administration in the United States

By Leo M. Chamberlain and Leonard E. Meece. Bulletin of the Bureau of School Service, University of Kentucky, Lexington, Ky.

This is the second part of an important study of the local unit of school administration in the United States. Part I is a survey of the basic and intermediate units as they exist. The present study presents in detail the characteristics of local systems of school control. It makes clear that two broad tendencies are at work. The first of these seeks the complete, or nearly complete, elimination of the old-type school district, and the substitution therefor of a larger district based on the town or township, or the county. The second tendency involves the consolidation of two or more existing districts into larger units, based on desirable attendance units.

The study also makes clear the character of special districts and imposed high-school units, changes in the taxing unit, and centralization of authority in the state. Studies of the present kind must be heeded if the wastefulness of the present district system is to be cleared up and if the rural schools are ever to achieve the uniform excellence of city school systems.

Stepping Stones in Practical Art

By Magdalene Pickens. Book I, for lower grades, 32 pages; Book II, for upper grades, 32 pages. The Comp Publishing Company, Omaha, Nebr.

Each of these two books presents 36 units in art for use in rural and village schools. The work includes drawing, design, and color, and is applied in project form to construction work, posters, the illustration of school themes, figure work. Seasonal and holiday interests, child activities, correlations with other academic subjects are all taken into account in the development of lessons and projects.

The Bonded Debt of 283 Cities as of January 1, 1936

By C. E. Rightor. Paper, 14 pages. Detroit Bureau of Governmental Research, Detroit, Mich.



92% of Waxing Costs is Labor

Any worth while saving must come from there. Reduced labor cost is a notable feature of

RUBBER GLOSS FLOOR WAX

A Philadelphia office building with 137,900 square feet of linoleum pays \$3,168.48 yearly for labor and \$291.65 for wax. Cut or boost the smaller figure 25% . . . the difference is little. But a like saving in labor costs is something to think about.

Because of unusual wearing qualities and high resistance to water damage on wet days and through damp mopping, renewals are less frequent. Rubber Gloss Floor Wax is materially reducing labor costs on millions of square feet of finished flooring daily. And in each case it is doing a 100% fine floor waxing job.

Our local distributor will furnish proof with a free test on your own floors.

FRANKLIN RESEARCH CO.

Philadelphia, Pa.

All our containers are tamper-proof sealed, and guaranteed only when unbroken.



AND RUBBER GLOSS CLEANER

A NEW AND DIFFERENT CONCENTRATED WAX SOAP CLEANER

Developed especially for preparing surfaces for the modern wax treatment.

It is ideal for general cleaning, seals the pores and cleans in one operation—a fine item for removing old wax.

Anyone with the responsibility of maintaining large surfaces owes it to himself and his employer to investigate this outstanding cleaner.

INDUSTRIAL COATINGS

Through the Wilbur White Division of FRANKLIN RESEARCH COMPANY there are available many highly technical emulsions that adapt themselves to the factory coating of rubber, leather, paper, nursery stock, citrus fruits, etc. . . . Special sales information on request.

The report on 283 cities of the United States and Canada having a population of over 30,000, showed a gross bonded debt of \$8,823 million at the beginning of the present year.

For 268 of the cities reporting, the total gross debt is \$8,049,118,467, and for 15 Canadian cities, \$773,735,966. The debt is divided approximately 48 per cent for general public improvements, 20 per cent for schools, and 32 per cent for public utilities.

The data showed a wide range in per capita debt. Exclusive of Washington, the figures ranged from \$14.55 for Rockford to \$377.13 for Atlantic City. The per capita net census groups is: for Group I, \$162.31, and \$118.40, \$92.32, \$87.92, and \$69.15, respectively. Within the groups the spread is from Milwaukee, with \$55.45 to New York, \$226.09, for Group I. For Group II, exclusive of Washington, from Seattle, \$63.34, to Newark, \$210.55; Group III, Peoria, with \$19.73, to Miami, with \$330.84; Group IV, Rockford to Atlantic City, with per capita stated; and Group V, Moline is low, \$15.08, and White Plains, high, \$351.32.

Accounting

By Richard N. Owens and Ralph D. Kennedy. Cloth, 696 pages. Price, \$4. D. Van Nostrand Company, Inc., New York, N. Y.

This book offers a complete course in accounting at the college level for students who desire to prepare for advanced positions in business or who plan to become certified public accountants. It is a fundamental statement of the principles of double-entry bookkeeping and includes not only the theory of the subject but extended examples for practice. It takes up in Part I financial statements, in Part II the sources of information for such statements, in Part III the procedure to be followed at the end of each accounting period, in Part IV the necessary forms of business organization, in Part V the especial accounting problems of manufacturing concerns, in Part VI the problems of handling assets and liabilities, in Part VII the accounting aspects of the newest types of sales and sales management, and in Part VIII the accounting aspects of financial administration of businesses. The final Part IX provides six practical sets for opening, conducting, and closing the books of typical forms of business.

Educational, Psychology, and Personality Tests of 1933, 1934, and 1935

By Oscar K. Buros, Rutgers University. Paper, 70 pages. Price, 50 cents. Bulletin No. 9, July, 1936, of the School of Education, Rutgers University, New Brunswick, N. J.

A cumulative collection of tests for the three-year period. It includes tests constructed for use in state-wide testing programs.

Per Capita Costs in City Schools, 1934-35

By Lula M. Comstock. Paper, 22 pages. Price, 5 cents. U. S. Office of Education, Washington, D. C.

This pamphlet is the ninth study in the series on per capita costs in city schools, which have been issued from the Office of Education since 1922. It represents an analysis of current expenses per student in average daily attendance in the public schools in 312 city school systems during the school year ending in June, 1935.

The report shows that the total cost per pupil in average daily attendance in the 312 city school systems in 1935 was

\$96.18. For the cities of Group I, the average was \$101.17; for Group II, \$81.02; for Group III, \$65.10; and for Group IV, \$69.25. Of the \$101.17 total cost in Group I, \$3.04, or 3 per cent, went for general control; \$78.98, or 78.1 per cent for instruction; \$9.37, or 9.3 per cent, for operation of plant; \$3.47, or 3.4 per cent, for maintenance of plant; \$2.48, or 2.4 per cent, for co-ordinate activities and auxiliary agencies; \$3.83, or 3.8 per cent, for fixed charges. Three cities in the State of New York led the cities in Group I in the highest total expenditure per pupil: Albany, with a total expenditure of \$142.05; New York, \$136.64; and Rochester, \$133.31. The lowest per capita cost in Group I was in Tampa, where it was \$40.39. The cost of general control in Group I ranged from 79 cents in Norfolk to \$9.82 in Albany; instruction, from \$30.67 in Tampa to \$111.58 in Albany; operation of plant, from \$30.67 in El Paso to \$15.94 in Albany; maintenance of plant, from 50 cents in Knoxville to \$15.57 in San Francisco; co-ordinate activities, from no expenditure in El Paso to \$7.04 in Indianapolis; fixed charges, from no expenditure in 5 cities, to \$10.24 in New York City.

Teachers' Contracts

A Report of the Committee on Tenure. Paper, 32 pages. Price, 15 cents. National Education Association, Washington, D. C.

This study has been made to discover "adverse conditions of employment," and is based on some 400 contract forms gathered from 42 states. The report is antagonistic to school boards and critical of all conditions which are not distinctly favorable to teachers.

The report unquestionably reflects the present attitude of mind of teachers' association authorities and arises out of the numerous difficulties which have existed during the depression. It would seem that the ultimate objective of the National Education Association could be better attained if a study of this kind gave more consideration to the actual difficulties which boards of education have been obliged to meet.

The Children of the Texas One-Teacher Schools

By Annie Webb Blanton. Paper, 110 pages. University of Texas Bulletin 3613, April 1, 1936, Austin, Tex.

This is an intensive study of 185 country children and an equal number of urban pupils, enrolled respectively in one-room country schools and city schools of Texas.

The study involves a wide variety of scientific tests to determine the mentality of the children and achievements in the various school branches. Further tests sought to bring out the physical condition of the children and to measure their socio-economic status. A final comparison is made of the school buildings, of the teachers, and of the general social and educational conditions under which the children live.

At Home and Away

By Nila Banton Smith. Cloth, 144 pages. Price, 56 cents. Silver, Burdett & Company, New York City, N. Y.

The general title of the reading series of which this is the first book, suggests both the organization and the general method of study. It is a "unit-activity" book in which closely related subject matter permits of activities and of reading lessons based thereon. The topics have value both for their child interest and their intrinsic usefulness in acquainting the young readers with their environment and with important social facts and customs. Whether the book is used in a progressive or a conventional school, its attractiveness, its balanced vocabulary, and careful

grading will make it a valuable aid for using reading as the center of the educational program.

Moccasins on the Trail

By Wolfe Thompson. Cloth, 316 pages, illustrated. Price, \$2. Longmans, Green & Company, New York, N. Y.

A well-sustained story of primitive life among the Indians in the rather broad territory, extending from what is now New York to what has become the Dakotas. The theme of the story is that the Indians were originally a passive people and that wars were sporadic. It may be questioned whether the North American Indian was communistic in his methods and practices, using that term in the modern sense. It is true that he had little sense of the ownership of property beyond what he needed to sustain life and to protect tribal interests. But there is plenty of evidence that all of the North American Indians had some clear notions of personal and property ownership and a well-defined system of inheritance.

THE DICTIONARY IS NOT STATIC

The modern dictionary is a growing, changing instrument. With a complex order of things, the vocabulary of man is widened and extended; new situations demand new definitions.

An editor of Webster's Dictionary brings some interesting facts to the attention of the reader. He submits the following:

The amazing diversity of human knowledge and interests is suggested by a glance at the list of subjects which required the services of special editors in the making of Webster's New International Dictionary, Second Edition. Besides such obvious fields as the various sciences, law, philosophy, etc., the corps of 207 special editors included, among others, experts in games, Egyptology, hatting, locks and locksmithing, magic, heraldry, philately, ropes and ropemaking, and horology, which (in case it is new to you) is itself defined as "the science of measuring time, or the principles and art of constructing instruments for indicating time, as clocks, dials, etc."

It seems, somehow, an odd coincidence that the word *ras* is used by both Italians and Ethiopians, and with similar meanings. *Ras* means "In Abyssinia, a prince—used as a title. In Italy, a local Fascist leader."

Not all the words which trip us up in pronunciation are long and formidable-looking. The following list is fairly innocent in appearance, but we believe that the average person, running through it, would have to turn to his dictionary, at least once, for first aid: *finance*, *azure*, *condolence*, *indisputable*, *status*, *gibberish*, *conversant*, *grimace*, *pianist*, *scenario*.

There seems to be a perennial fascination in trying to discover the longest word in the language. The longest word in the *New International* is said to be *honorificabilitudinitatibus*, but this is "a pedantic nonsense word," meaning honorableness, which apparently owes its inclusion in the dictionary to the fact that it was used by Shakespeare, in *Love's Labour's Lost*. Many of the long words of a more serious sort seem to have been contributed by science—words like *lymphangiendothelioma* and *pancreaticocholecystostomy*. Among the words which sound more like "plain English," a fairly good-sized one is *disestablishmentarian*. Perhaps the most staggering accumulations of letters are names of chemical compounds. The following highly technical terms, while not themselves entered in the dictionary, appear, for the benefit of experts, in definitions of chemical terms: *methyl-amino-acetyl-pyrocatechol*, *3-acetamido-4-hydroxy-benzene-arsonic*.



**It works for your school
all day long!**
...for a few cents an hour

THIS PROGRAM SOUND SYSTEM is an important aid to teaching—and to more efficient administration, too. It brings to the classroom the words of noted educators—distributes announcements to any or all rooms immediately—makes available the music of great composers and orchestras.

This new Western Electric equipment is unusually low in first cost and operating cost.

In a single attractive cabinet it combines microphone, radio, record reproducer, amplifiers and keys for selecting loud speakers in as many as 60 locations.

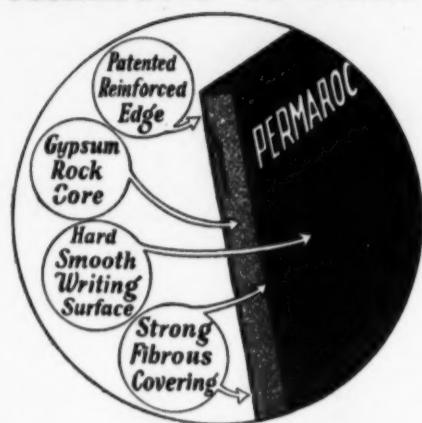
Like the larger Western Electric apparatus used in so many leading schools, this compact unit assures high quality sound. For full details: Graybar Electric, Graybar Building, New York—or Graybar's nearest branch.

Western Electric

Distributed by GRAYBAR Electric Co. In Canada: Northern Electric Co., Ltd.

PROGRAM DISTRIBUTION AND PUBLIC ADDRESS SYSTEMS

MILLIONS OF FEET IN DAILY USE



Many of our finest Universities and Schools use and endorse ROWLES Permaroc Blackboards. Its uniform color and superior writing and erasing surface have a particular appeal.

We also manufacture Duroplate and Endurarc Blackboards.

ROWLES Perma Korkbord and map display rail are important accessories.

Write for samples and literature containing testimonials of leading architects and educators with our special long term guarantee.

DANN'S NOISELESS ERASERS



DOUBLE LOCK STITCHES GUARANTEED TO HOLD.

Imitated but never duplicated. Dann's noiseless eraser for many years has been the standard of specifications of the United States Government as well as the Boards of Education of New York City, Chicago, Philadelphia, Pittsburgh and the majority of the large cities of the country.

Insist that DANN'S erasers be specified.

Write for samples and information.

E.W.A. ROWLES CO.

MANUFACTURERS
2500 PRAIRIE AVENUE
CHICAGO ILLINOIS

PENS
PENS
PENS
PENS

exclusively since 1876



Every day . . . every minute, during this long period, the undivided attention of this organization has been centered on this one product. Little wonder that pencil point smoothness and long wearing quality have been so perfectly combined in these school pens.

TURNER HARRISON PEN MFG. CO. Philadelphia

SPEAKING OF TESTS-

Why not take advantage of our free trial offer to try out Sengbusch hard rubber, unbreakable inkwells? To prove their merit, we offer to equip one entire room with Sengbusch inkwells for a 90-day test at no obligation. Check these points:



- ★ Practically indestructible
- ★ Save money on ink—minimize evaporation
- ★ Styled to fit the desks you are now using

Write for full details and free sample
SENGBUSCH SCHOOL INKWELLS
918 SENGBUSCH BLDG., MILWAUKEE, WIS.

UNIVERSAL'S THE BUY!

16MM UNIVERSAL SOUND PROJECTOR LEADS THE FIELD IN VALUE. SIMPLE TO OPERATE STURDILY CONSTRUCTED



for years of trouble free service . . . brilliant image . . . true tone-value. Low in price and easy on films. Finger touch control adapts it to any size audience. Comes complete in two handy carrying cases. No extras to buy. Convenient terms may be arranged. Try a UNIVERSAL side by side with any machine on the market. You owe this test to yourself before making a decision.



SEES ALL—PLAYS ALL
UNIVERSAL

Write for Prices and Complete Information
UNIVERSAL SOUND SYSTEM, Inc.
Manufacturers of 16mm.-35mm. Sound Projectors
Factory & General Offices
9th St. & Allegheny Ave.,
Philadelphia, Pa.
Paramount Bldg.,
New York City.

CHOOSE LOCKS WITH THE SAME CARE AS TEXT BOOKS



CARE AS TEXT BOOKS

The security of students' possessions is a responsibility you cannot overlook. This year resolve to use the keyless locks that have been the preference of schools and colleges for almost 50 years. They are specially built to fill the needs of the educational institution.

The MILLER RED DOT No. 35, in No. 1 finish, has an all steel hasp cadmium plated with a die cast enamel lacquered case. No. 2 finish is chromium with cadmium hasp. Rust proof. Extremely simple yet strong construction. Operates by click or sight. Attractive appearance. Automatic locking. Send for sample.

We invite inquiries. Tell us your lock troubles. Almost 50 Years of Experience Manufacturing Keyless Locks is at your disposal.

The J. B. Miller Keyless Lock Co.
Established 1889

200 Lock Street

Kent, Ohio



RED DOT No. 35

The Finest in
Black and White and
Color Engraving

ARTISTS ENGRAVERS
PREMIER
818 W. WINNEBAGO ST.
ENGRAVING CO.
MILWAUKEE

A Complete Line

Comfortable Design



Modern Desks for Modern Schools. Specify Arlington Desks and get The Best — they cost no More.

Durable Construction

Large Stock Available for prompt shipments.



ARLO No. 900



EXCEL No. 100

Before specifying any school furniture consult with our planning and layout department. In the meantime, examine our latest catalog. Copy sent on request.

ARLINGTON SEATING COMPANY
MANUFACTURERS
ARLINGTON HEIGHTS, ILLINOIS

EXECUTIVE RESPONSIBILITY IN CITY SCHOOL ADMINISTRATION

(Concluded from Page 20)

Brooklyn Advisory Committee on Public Education in 1895. This committee recommended the appointment by the mayor of a commissioner of education for a term of five years. It was to be the duty of the commissioner to formulate and present to the board of education, for its approval, plans of administrative policy; to supervise and direct the work of the various bureaus and departments; to direct the financial administration; to veto appropriations made by the Board; to appoint the officers, including the superintendent of public instruction, subject to confirmation by the board.³⁰ As in the Cleveland plan and in the plan proposed by the subcommittee of the Committee of Fifteen, the superintendent of instruction was given large responsibility in connection with the selection and dismissal of teachers, supervision of education, and other purely educational matters. The Brooklyn proposal provided appointment of the superintendent for five years, with dismissal by a majority of the board of education upon recommendation of the commissioner.

Thus multiple and dual executive responsibility in city school administration developed during the nineteenth century. Toward the close of the century there was some recognition of the desirability of unitary executive responsibility. Then educators were active in behalf of the plan to make the school director or business manager with large powers, rather than the superintendent of schools, the chief executive officer. In a subsequent article the developments of the twentieth century will be related followed by a presentation of the findings of a survey of the present extent of dual and unitary executive responsibility in cities of the United States of 100,000 population or over.

³⁰Brooklyn, *Report of Brooklyn Advisory Committee on Public Education*, pp. 4-5; 16-18.

SOME PROBLEMS IN SCHOOL TRANSPORTATION

(Concluded from Page 26)

The Cache county school district is at present gathering cost and statistical data on twelve different forms devised by the school clerk which, with the information contained on them, will answer many of the questions pertaining to transportation operation in the district. As a result of the information compiled, the board of the Cache school district has reversed its policy and since that time has followed a trend toward district ownership of all bus transportation equipment in the Cache district. The report compiled by the district, shows, the average yearly operating costs for district-owned and privately-owned equipment.

Year	District-Owned Busses	Privately-Owned Busses
1931-32	\$1,110	\$1,808
1932-33	915	1,695
1933-34	994	1,332
1934-35	1,122	1,423

Other figures compiled within the past two years substantiate this policy.

During the year, there were 2,082 pupils transported to school in busses, at a cost less than that required to transport 1,670 pupils five years ago.

Year	Students Transported	Cost
1930-31	1670	\$40,108.19
1931-32	1931	46,789.23
1932-33	1967	38,360.85
1933-34	1967	35,714.57
1934-35	2082	39,887.96

The Cache school district is now in step with the national trend in the direction of publicly-owned school transportation equipment. The centralization problem and the consolidation of schools in Cache have naturally increased the district's transportation burden. During 1936, the district operated a fleet of 24 publicly-owned school busses, in addition to transporting 500 students by train, contracting with two private bus owners, and ten individuals who operate cars or wagons in isolated sparsely settled areas.

The board of the Cache district feels satisfied in its accomplishment of the transfer from privately-owned to publicly-owned bus transportation. In taking this action it is convinced that the transportation

DEPENDABLE Service ...for OVER 30 Years

Experience counts. That's why school buyers everywhere look to Beckley-Cardy for good quality, fair price, and DEPENDABLE SERVICE.

Why not write today for:

THE BECKLEY-CARDY CATALOG →
"A Guide to Wise Buying"



SHADES

All types and fabrics. "Sightsaver" Double Roller type particularly recommended for efficient lighting and ventilation. Send for special catalog 59BJ.

FURNITURE and EQUIPMENT

High standards of durability and flexibility for wide usage. Correct posture is encouraged. Send for special catalog 59AJ.

BLACKBOARDS and CORKBOARDS

A complete line for new buildings or replacements. Special catalog 57AJ lists all well-known types and includes helpful technical information.

BECKLEY-CARDY CO.

1638 INDIANA AVENUE, CHICAGO, ILLINOIS

problem is an extension of the school plant and as such is an essential and necessary educational and social function, which is definitely the responsibility of the board of education of the district.

Figures compiled by the Cache district show that while it is operating its busses at an average cost of 5.7 cents per bus mile, for all direct operating costs, all possible operating costs, including salaries, depreciation, etc., amount to 22.5 cents per mile. It indicates that busses while loaded are operated to 87 per cent of their capacity. The same busses on the basis of the total mileage, on an equated student basis, are being operated by only 15 per cent of their total capacity; and that slightly less than 50 per cent of the total operating cost goes toward salaries of bus drivers.

While it is impossible to operate school busses to capacity under any normal conditions, can the figures be criticized? Can the school problem be so adjusted as to promote the same complete utilization of the equipment and the drivers' services? This problem has not as yet been solved by the Cache district.

1933-34		1934-35	
District	Private	District	Private
11	9	15	8
\$10,934.08	\$11,985.78	\$16,164.52	\$11,387.45
1,313,332	1,030,476	1,922,726	991,638
8.4 mills	11.6 mills	8.3 mills	11.4 mills

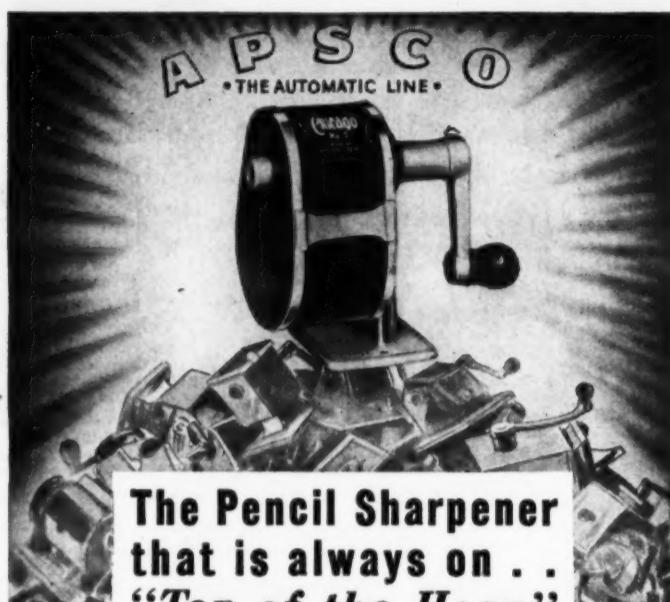
THE KNOXVILLE SALARY SCHEDULE

The board of education at Knoxville, Tenn., has adopted a new salary schedule for teachers, based on the teacher's classroom experience and academic preparation.

In the elementary schools, teachers without a degree receive \$600 during the first year, and rise to \$1,450 in the sixteenth year; with a bachelor's degree the initial salary is \$600 and in the sixteenth year \$1,500. Teachers with a master's degree begin at \$600, and rise to \$1,550 in the sixteenth year.

In the high schools, the initial salary for teachers without a degree is \$600, and the annual increases bring the maximum to \$1,450 in the sixteenth year; teachers with a bachelor's degree begin at \$810, and rise to a maximum of \$1,850 during the nineteenth year; teachers with a master's degree begin at \$900, and rise to a maximum of \$1,900 in the nineteenth year.

Elementary teachers, who are promoted to the high schools, receive full credit for elementary experience and will be paid the amount which they would receive



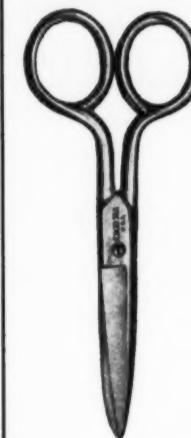
APSCO
THE AUTOMATIC LINE.

**The Pencil Sharpener
that is always on . . .
"Top of the Heap",**

Did you know that more than 200 manufacturers of pencil sharpeners have come and gone? Today the Automatic Line stands high above all other makes as the world's largest manufacturer of pencil sharpeners. . . . It is no wonder that Automatic Pencil Sharpeners have for years been standard equipment in 85% of our schools.

AUTOMATIC PENCIL SHARPENER COMPANY
58 East Washington St., Chicago

SEND FOR FOLDER FOR COMPLETE LINE OF APSCO AUTOMATIC PENCIL SHARPENERS



Monarch
FORGED STEEL SCISSORS
Withstand Hard Usage
MANUFACTURED ESPECIALLY—

MONARCH
A high quality forged steel line. Made especially for school use. All styles and finishes. Every pair guaranteed in quality and workmanship to give satisfaction.

**Other Popular Priced Scissors and Shears—
Circulars on Request.**

FOR PRIMARY GRADES—
with blunt or pointed ends.

FOR ART CLASSES—
Hardened and tempered steel; carefully ground edges, accurate assembly for precise work.

FOR VOCATIONAL COURSES—
A style for every need. Heavily nickelized finish to withstand constant use. Also supplied with enamel handles.

Our long experience with school requirements, and our complete lines, enable us to supply your needs, whether you seek low first cost, or ultimate economy. Samples on request—prices through responsible jobbers.

THE ACME SHEAR COMPANY
Famous since 1874 Bridgeport, Conn.

BETTER SCHOOL FOLDING CHAIRS

Proven by years of service

No. 55 as shown, with veneer panel back and seat.
No. 44 same as No. 55 except has slat back and seat.
No. 11 developed for the medium and low priced field, similar in appearance and has slat back and seat.
A wide range of models in Adult, Intermediate, Juvenile, Kindergarten and Portable Assembly Chairs.
Standardize your seating with STANDARD for Uniformity of Appearance, Simplicity in Design, Strength and Service.

STANDARD MANUFACTURING COMPANY
Cambridge City Indiana



if their experience had been acquired in the high school.

For teaching experience outside of Knoxville, full credit is allowed for the first three years' service. Thereafter one-quarter credit is given for teaching in communities below 10,000 population; one third for cities under 30,000; one half for cities under 100,000; and full credit for cities above 100,000.

Knoxville teachers who return after a leave of absence, receive the amount which they would naturally be paid when they left, except as increased educational credit carried them under the salary classification.

Teachers in the colored schools receive 90 per cent of the salary paid to white teachers.

PONTIAC MEETS THE DEPRESSION

(Concluded from Page 32)

wholly accidental procedure. It was and is the view of the writer that too wide a gap existed

in 1930-31 between the upper and lower brackets, and that in restoring wages an attempt should be made to narrow the gap and effect a fairer distribution of wages. It was for this reason that the flat rate of increase has been thus far employed in the process of salary restoration.

A comparison of total teachers' salaries paid in 1930-31 as compared with 1935-36 shows that we have regained 73 per cent of our loss. The coming year (1936-1937), on the basis of the proposed program, will increase the percentage of restoration to 85 or 86 per cent of its 1930 level.

The figures are as follows:

1930-1931.....	\$883,150.00
1935-1936.....	644,707.99
1936-1937.....	766,707.00 (Approx.)

PARAGON CHALKBOARD

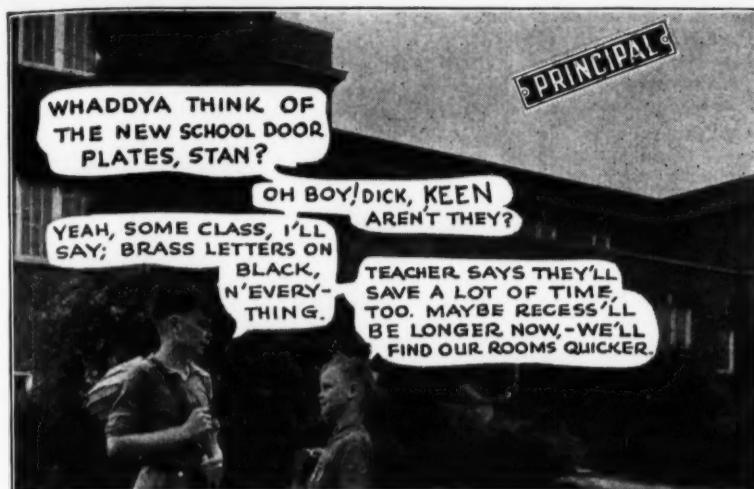
Is the answer to a long felt need for a high quality chalkboard of great strength, and at low cost. Composed of long fibre wood, mixed in oil, and formed under pressure of eight thousand pounds to the square inch. Cannot be broken with a hammer, is waterproof, and guaranteed against warping or bulging. Takes full clean chalk mark, is easily erased, and under normal use is guaranteed for ten years. Has uniform thickness of one-quarter inch, with true edges, and can be set with matched joints the same as natural slate. Furnished in widths of 3, 3½ or 4 feet, and in lengths from 6 to 12 feet. Can be had in black, green, tan, white, or yellow. Write for samples.

N. Y. SILICATE BOOK SLATE CO.
20 VESEY STREET NEW YORK, N. Y.

LONG BEACH BUILDS A SCHOOL PLANT

(Concluded from Page 36)

this city with a school enrollment of approximately 28,000 has wrecked and salvaged one school plant and financed, built, and occupied its successor with the loss of but two weeks of school. No one knows what the limit of severity of an earthquake is, but Long Beach does know that its school buildings were designed to resist a quake at least as severe as that of Tokio. All the citizens hope that if another quake ever visits this vicinity, that the children will all be at school for as they say, "if they aren't safe there, there isn't any place in town where they would be."



AS MODERN AS TOMORROW

These Schoolroom Door Plates are etched on 24-gauge polished brass, raised letters on black. Dignified, legible, indefinitely durable, economical. Size 1 1/2x7" with screw holes and screws.

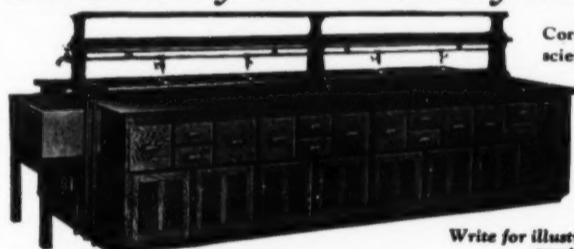
Hundreds of Titles stocked for immediate delivery including: All Grades, 1st to 8th, Grouped Grades, as "1st & 2nd Grades," Room Letters, A to H (separate) 20c each, Room Numbers from 1 up. Also, hundreds besides the following:

Agriculture	Club Room	Commercial	Girls' Rest Room	Mathematics	Shop
Algebra	Com. Dept.	Gymnasium	Girls' Shower	Men	Social Room
Arithmetic	Correct Speech	History	Men Teachers	Men Teachers	Social Science
Art	Dean	Home Economics	Information	Music	Study
Art Room	Diet Kitchen	Industrial Arts	Intermediate Dept.	Manual Arts	Study Hall
Art Supervisor	Dietician's Office	Janitor	Junior Dept.	Normal Trng.	Study Room
Assembly Room	Dining Room	No Admittance	No Admittance	Nurse	Senior Dept.
Assembly	Dom. Science	No Soliciting Alld.	No Soliciting Alld.	Office	Sewing Room
Athletics	Dormitory	without permission	of Superintendent	Spanish	Stock Room
Auditorium	Drafting	J. H. Assembly	of Superintendent	Supply	Supplies
Basement	Elem. Grades	Keep Door Closed	Office	Supply Room	Superintendent
Biology	Elevator	Keep Out	Physics-Chem.	Superintendent	Supt's Office
Bd of Ed.	Engineer	Kindergarten	Physics	Student Rooms	Student Rooms
Boys	Entrances	Kindergarten Dept.	Physical Dir.	Store Room	Stage
Boys	English	Kitchen	Private	Seats	Seats
Boys' Locker Rm.	Exit	Latin	Primary	S. H. Assembly	S. H. Assembly
Boys' Shower	Exit	Lecture Room	Physical Cui.	Sciences	Sciences
Bailey Room	Fire Escape	Lockers	Principal	Sci. Storage	Sci. Storage
Bailey Room	French	Laboratory	Primary Dept.	Teachers	Teachers
Book Room	Gentlemen	Lady-Teachers	Push	Teacher Trng.	Teacher Trng.
Book Store	Gen. Science	Ladies	Pull	Tool Room	Tool Room
Botany	Geometry	Lavatory	Public Speaking	Typing	Typing
Cafeteria	Geography	Library	Rest Room	Typewriting	Typewriting
Chapel	German	Librarian	Recitation	Vocational Agr.	Vocational Agr.
Chemistry	Girls	Language	Reading Room	Wash Room	Wash Room
Check Room	Girls	Languages	Registrar	Women	Women
Chemistry	Girls	Latin & English	School Board	Zoology	Zoology
Civics	Girls	Math. & Science	School Nurse		
Clock Room	Girls' Locker Rm.	Music Supervisor			

Price (based on quantity): 1 to 5, 60c each; 6 to 11, 50c each; 12 or more, 45c each.

HOFF RUBBER STAMP CO., INC., Manufacturers
224 South Fourth Street, MINNEAPOLIS, MINN.

PETERSON . . . Quality Laboratory and Library Furniture



Correctly designed and scientifically constructed for durability. Specifications and quotations on request, without obligation.

Write for illustrated catalog of the complete line.

LEONARD PETERSON & CO., INC.

Manufacturers of Guaranteed Laboratory and Library Furniture

OFFICE AND FACTORY: 1222-34 Fullerton Ave., Chicago, Ill.

Representatives conveniently located to serve you.

CIRCLE A

Folding Partitions
Rolling Partitions
Sectional Partitions
School Wardrobes

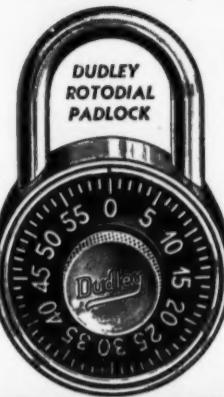
Grandstands—Bleachers
of Wood or Steel—
Portable or Permanent
Sectional School Buildings

For more than a decade—manufacturing supplies
to schools throughout the country. Write for detailed
information on any of the products listed above.

NEWCASTLE PRODUCTS, INC.

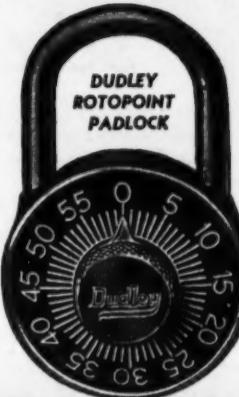
625 South 25th Street • Newcastle, Indiana

PROTECT YOUR LOCKERS WITH THESE



DUDLEY COMBINATION LOCKS

• Dudley Rotodial and Rotopoint locks are self-locking, simply operated, sturdy and foolproof. Over 200,000 possible combination changes. For Built-In Locker Locks: Specify the Dudley Dual-guard, S-540, masterkey-ed, self-locking, combination locker lock.



Dudley Lock Corporation

Corner Franklin and Randolph Streets
Dept. A-9, Chicago, Illinois

Use EverWear Air Cushioned Safety Swing Seat

... a new development of the principle of safety in swing seats. This Swing Seat has a wooden case, completely edged with deep air-cushioned rubber of exceptional toughness and durability, which is locked to the wooden case by means of locked steel strips. If and when the child is struck, the seat absorbs the shock of the blow. No dangerous surfaces, edges or projections to injure the child. Priced low enough to meet your budgets. Write us for details.

... Play Safe... With Safety EverWear Safety

PLAYGROUND APPARATUS

Minimize accidents in your school playground. Give children the protection Safety EVERWEAR EQUIPMENT assures.

WRITE FOR CATALOG 28
For Beach and Swimming Pool Equipment
WRITE FOR CATALOG 28-W

THE EVERWEAR MFG. CO.
SPRINGFIELD • • • OHIO

Stage Equipment

Velour Curtains — Draperies, Scenery and
Rigging Equipment of the Highest Quality.

Service and Installation by
Experienced Personnel

Write

Twin City Scenic Company

1126 Chimes Bldg. 2819 Nicollet Ave. 25 Henry St. 4704 Pershing Ave.
Syracuse, N. Y. Minneapolis, Minn. Detroit, Mich. Fort Worth, Texas

FENCE

for the
PROTECTION
of school children
and school property

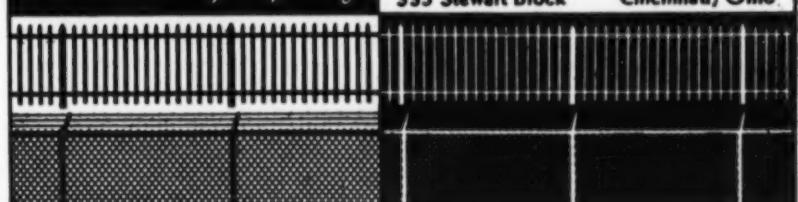
Stewart
FENCES

IRON AND CHAINLINK WIRE

New Catalog sent upon request
For 50 years Stewart Fences have protected the lives of school children by restricting them to safe play areas.

Complete literature sent on request

The Stewart Iron Works Co., Inc.
335 Stewart Block Cincinnati, Ohio



School Architects Directory

F. E. BERGER & R. L. KELLEY
Architects
EDUCATIONAL BUILDINGS
Lincoln Bldg. CHAMPAIGN, ILL.

BONSACK & PEARCE INC.
WILL MAKE SURVEY OF YOUR NEEDS
Complete Architectural & Engineering
Services by School Specialists
411 Olive Street St. Louis, Mo.

T. H. BUELL & CO.
ARCHITECTS
730-14th Street DENVER, COLO.

JOHN D. CHUBB
ARCHITECT and CONSULTANT
Educational and Public Buildings
109 North Dearborn Street Marquette,
Chicago, Illinois Michigan

CARL W. CLARK A. I. A.
State Theatre Building Cortland, N. Y.
Architect
Consultant and Plan Advisor—Mr. Frank H. Wood,
former Director, Division of School Buildings and
Grounds, New York State Department of Education.
New York Office—Suite 1432-33 W. 42nd St.

FLOYD E. DOUGHERTY
ARCHITECT
79 West Monroe St., Chicago, Ill.

MARTIN J. GEISE Architect
I make a Specialty of Designing School Buildings in
Illinois, Iowa, and Missouri. Over 20 Years Experience.
QUINCY, ILL. KEOKUK, IOWA
AND
109 N. 8th Street State Central Saving Bank
Building, 6th and Main

ROBERT R. GRAHAM
REGISTERED ARCHITECT
States of New York—New Jersey—Pennsylvania.
Member—N. Y. Chapter American Institute of Architects.
Complete Architectural Service on School Bldgs.
Consultations—
25 Prospect St. Middletown, N. Y.

GUILBERT & BETELLE
Architects
Chamber of Commerce Building
Newark, New Jersey

PATRICK JONES RETIRES
Mr. Patrick Jones, superintendent of supplies for
the New York City school system, retired on August
31, after forty years of service. He is succeeded by
Mr. Gustav Graef, who has been his deputy for
some years.

Mr. Jones entered the New York City school
system more than fifty years ago as a district super-
intendent of the old New York City schools (Man-
hattan), in charge of the purchase of supplies. Upon
the formation of the greater city, he was put in charge

Wm. G. Herbst, A. I. A. E. O. Kuenzli, A. I. A.
HERBST and KUENZLI
ARCHITECTS
Educational and Public Buildings
1249 North Franklin Place Milwaukee, Wis.

WARREN S. HOLMES COMPANY
Architects and Engineers
Appraisals of School and College Buildings
2100 OLDS TOWER BLDG., LANSING, MICHIGAN

WM. B. ITTNER, Inc.
Superior Architectural and
Engineering Service Rendered
408-Board of Education Building, St. Louis, Mo.

JOS. C. LLEWELLYN CO.
ARCHITECTS and ENGINEERS
38 S. Dearborn St. Chicago
Ralph C. Llewellyn M. W. S. E. and A. I. A.

McGUIRE & SHOOK
ARCHITECTS
Specialists in Design of Educational Buildings
Consulting Service to School Officials
INDIANAPOLIS, INDIANA

Perkins, Wheeler & Will
ARCHITECTS
DWIGHT H. PERKINS—Consultant
333 N. Michigan Ave. Chicago, Ill.

C. Godfrey Poggi
ARCHITECT
Elizabeth, New Jersey

STARRETT and VAN VLECK
ASSOCIATES
ARCHITECTS
267 Fifth Avenue, New York, N. Y.

TOOKER & MARSH
ARCHITECTS
101 Park Ave. New York City, N. Y.

of the work for all the boroughs and was responsible
for the centralization of all purchases, and the opening
of the central depository and the borough sub-
depositories.

Mr. Jones was a man of great force and buying
intelligence, who could not be influenced in the conduct
of his office by unwise school authorities on the one
hand, or by manufacturers, publishers, or politicians
on the other. He was responsible for the development
of the system of purchasing on open specifications,
and for the detailed methods of receiving, warehous-

ing, and distributing all instructional materials and
building-maintenance supplies. It was his foresight
and keen buying methods that have made it possible
for New York City to be generous in supplying books
and supplies at a lower percentage of total costs than
has been possible in any of the large cities.

An outstanding example of his work was the development
of specifications and details of delivery for
fuel. His plan not only provided fuel of the kind
particularly suited to the use of the schools, but over-
came the price-fixing which had been in vogue. For
several years the annual savings were upwards of a
hundred thousand dollars.

In 1914, he anticipated a considerable increase in
the cost of textbooks due to the rising price of paper
and binding, and drew up five-year contracts which
enabled the board of education to buy its textbooks
at pre-war rates through the year 1919. It is estimated
that the saving approximated \$2,000,000 during the
period.

The magnitude of the purchasing problem of the
New York City schools may be appreciated in a small
measure, when it is remembered that the cost of
general supplies for instructional purposes in 1934-35
was \$1,148,500, and for textbooks and library books,
\$1,260,022. These sums do not include the cost of
supplies for auxiliary agencies of instruction. The
latest bill for 216,000 tons of coal was \$1,218,196.
The general list of school supplies included 18,512
items and ranged from wheelbarrows to atomizers.
There were 4,500 bidders.

Mr. Jones's department has been investigated a
number of times in connection with the general surveys
of the schools. In each case the surveyors found that
the business of the bureau had been carried on with
absolute impartiality and splendid integrity.

GUSTAV GRAEF ELECTED HEAD OF SUPPLY DIVISION OF THE NEW YORK CITY SCHOOLS

Mr. Gustav Graef, formerly deputy superintendent
of supplies for the New York City board of education,
has been elected superintendent of the department,
to succeed Patrick Jones who has retired.

Mr. Graef is a native of New York City, having
been born on the lower east side. He was educated
in the city's public schools, the New York University
Law School, and the Broker School of Accountancy.

He entered upon his work with the New York
City school system as an office boy in June, 1898. His
ability was recognized and he was given a place in
the bureau of finance.

In 1921, Mr. Graef organized a retirement system
for the administrative employees of the board. Three
years later he was made a deputy auditor, and was
placed in charge of all payroll organization.

During the past seven years Mr. Graef has served
on the Board of Regents' Advisory Committee and
has been chairman of its committee on taxes and debt
limitation. He assisted in the preparation of the
Friedsam Act on state aid for schools, and has since
handled state-aid problems for the board.

Mr. Graef also had charge of the supervision of the
finances of the school relief fund during the period
when teachers contributed to the relief of needy children
in the schools. His election to the position is a
recognition of his fine work during his 38 years of
service to the schools of New York City.

NEW YORK BUDGET INCREASED

The board of education of New York City has
approved its 1936-37 school budget, calling for a total
of \$142,664,921, which is an increase of \$155,026 over
the preliminary budget estimate, and \$5,575,864 higher
than the estimate of a year ago. The increase is
attributed to increased community service and recreation
services. A large part of it was allocated to the
program for the reduction of class sizes in the senior
and junior high schools. A list of desirable items, originally
proposed, were dropped from the budget because
of restricted finances.

The enormity of the New York City problem is
understood from slight changes made in the average
ratio of pupils per teacher. In the senior high schools,
the new budget proposes a reduction of the pupil-
teacher ratio from 31.5 to 30.5. This reduction involves
742 additional teaching positions, costing \$944,000. In
the junior high schools, it is proposed to reduce the
ratio from 36 to 35, involving 104 additional teachers,
at a cost of \$250,000.

The budget includes a proposed expenditure of \$3,
425,000 for repairs and alterations in school buildings.

♦ San Mateo, Calif. The board of education has
adopted a budget of \$589,207 for the school year 1936-
37. The largest item is \$241,616 for instruction ex-
penses. Of the total amount, \$240,000 is to be ex-
pended for the junior college, and \$349,207 for high
schools.

♦ Fort Worth, Texas. The board of education has
sold \$1,350,000 worth of 1934 school bonds at par,
with accrued interest and a premium of \$109,066.
The proceeds of the bonds will be used for the com-
pletion of the school-building program.

DUDFIELD'S Dustless
Crayon Trough and Blackboard Trim
A neat substantial metal trim for blackboards, with a chalk trough that takes care of the dust, and an eraser cleaner for cleaning erasers.
DUDFIELD MFG. CO. 16 W. Kansas Street
LIBERTY, MISSOURI

for BETTER STAGE CURTAINS
Write
UNIVERSAL
SCENIC STUDIO, INC.
1218-24 No. Fifth St. Milwaukee, Wis.

CAPS and GOWNS
For Graduation, Chorus Groups, Choirs. Special money-saving, money-making plan. Write for full details and returnable sample. No expense or obligation on your part. DeMoulin Bros. & Co. 1050 S. 4th St., Greenville, Illinois.



Write for your free sample. Let **SLATEX** prove blackboards need never be old or grey. Costs approximately 75¢ per room.
Carbon Solvents Labs.

965 Broad Street Newark, N. J.

SCHERMERHORN TEACHERS' AGENCY
Est. 1855 CHARLES W. MULFORD, Prop. Est. 1855
366 Fifth Avenue, between 34th and 35th Sts., NEW YORK
Branch 945 Union Trust Bldg., Pittsburgh, Pa.
Offices: 1836 Euclid Avenue, Cleveland, Ohio
A Superior Agency for Superior People
We Register Only Reliable Candidates
Services Free to School Officials
Member National Association of Teachers' Agencies

FISK TEACHERS AGENCY
CHICAGO

The best school systems throughout the country, both public and private, request us to recommend teachers to them. Excellent teachers are always in demand.

ADDRESS 1200 STEGER BUILDING
28 EAST JACKSON BLVD., CHICAGO, ILL.

HART MANUFACTURING COMPANY
LOUISVILLE Incorporated KENTUCKY
Manufacturers of:
School Room Heaters... with Ventilation Feature •
SANOLET Septic Toilets • Chemical Toilets • Large
Steel Septic Tanks • EVERCOOL Gravity Drinking
Fountains • Heavy Duty Gas Ranges for Domestic
Science Department and Cafeteria.

FOR BETTER STAGE
EQUIPMENT
BECK STUDIOS
1001 HIGHLAND AVE.
CINCINNATI, OHIO
DRAPERY - SCENERY - RIGGING
76 YEARS OF SERVICE

SAVE FLOORS-END NOISE

WITH FAULTLESS CUSHION CHAIR GLIDES AND
DOUBLE BALL BEARING CASTERS
Faultless Cushion Chair Glides are mounted in live
rubber which gives them amazing flexibility and
resilience. Note how the steel reinforcing frame pre-
vents the nail from pulling out of the base. The
rounded surfaces glide smoothly over the floor
without scraping or grating.
And for easy rolling, free swiveling office chairs,
there's nothing like Faultless Double Ball Bearing
Casters. Send for catalog and prices, or ask your
supply house.

FAULTLESS CASTER CORP.
Dept. AS-9, Evansville, Indiana

FAULTLESS CASTERS

NEW FOLDING TABLES
Transform your gymnasium, recreation or other room in-
to dining room in five minutes. In successful use in Detroit
schools for five years. Illustrated literature on request.
Wm. E. HARTMAN & CO.
3105 E. Grand Boulevard DETROIT, MICH.

BOOK MANUFACTURERS
.... Book Binding
.... School Annuals
.... Magazine Binding
Boehm Bindery 104 E. Mason St. Milwaukee, Wis.

UNIFORMS
Our style book shows 88
Designs in Colors. Also special
designing to embody your own
ideas. Fine samples. By all
means, write us before you buy.
DeMoulin Bros. & Co. 1049 South
Fourth St., Greenville, Illinois.

AMERICAN SANDERPLANE
With New Flexible Shoe
Now shock absorbing shoe
on this sander produces
smoother jobs in a shorter
time without any vibration.
Use the American Sander-
plane for Manual Training
Work, Resurfacing Black-
boards, Refinishing Desk
Tops and many other applications. Get a demon-
stration or more information now by writing to—

The American
Floor Surfacing Machine Company
516 South St. Clair St., Toledo, Ohio

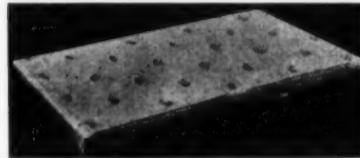
Tubular and Spiral Slide Type FIRE ESCAPES
More than 5,000 in use
POTTER MFG. CORPORATION
4808 N. Kimball Ave., Chicago, Ill.
Catalog on Request

COMPLETE STAGE EQUIPMENT and DRAPERIES

TIFFIN
Scenic Studios
TIFFIN, OHIO
TRADE MARK

CATALOGUE UPON REQUEST

Gymnasium Mats



Manufacturers of fine mats for a quarter of a century.
SEND FOR BOOKLET

PETERSEN & CO. Est. 1911
4221 North 16th St., Philadelphia, Pa.

Columbia Chair Desk

Scroll Plywood seat
if desired

Medium size \$4.35
Add 30c for larger sizes.
Deduct 30c for smaller
sizes.

Send for Catalogue

Columbia School Furniture Corp. \$4.35
Indianapolis Indiana

REPRESENTATIVES WANTED—We have openings
for six salesmen now calling on school trade who are
interested in profitable, fast-selling sideline. Guaranteed high
quality product—steady repeat business—good commission.
Write Morrison Laboratories, Rockford, Illinois.

Unsightly Ink Spots . . . Disappear As If By MAGIC!

ZIP INK ERADICATOR DOES IT . . . TRY IT!

ZIP is the perfect single fluid ink remover. It is used extensively by schools, bookkeepers and others who find it necessary to use ink. Simply apply to writing and blot excess fluid. Leaves the surface of the paper as good as new. Sold direct to users only. Price 25 cents per bottle. 10% discount in dozen lots.

Send Your Order To

DON BENN OWENS, Jr., Manufacturing Chemist
1012 WASHINGTON STREET DAYTON, OHIO

● FILLING YOUR NEEDS EXACTLY ●



You want accessibility, cleanability, direct seat support, perfect counterbalance, complete safety under overload, compactness in either the open or closed position. Universal Type XL Fold-A-Way Gymnasium Stands offer you these and certain plus-values: perfect vision due to uniform and proper rise in each row of seats—a new covered top made possible by folding arrangement wherein the seat boards so nest that not even a hand ball can fall behind the stand when closed. Send dimensions of available space in your gymnasium and we will forward estimate of cost.

UNIVERSAL BLEACHER CO.

CHAMPAIGN, ILLINOIS

● THE NEW UNIVERSAL FOLD-A-WAY ●

After the Meeting

What Made the Nut Bolt?

The identity of the young lady is withheld, but the memory of her answer lingers on with the instructor conducting a science course at a Denver high school. One of the requirements in the written quiz was, "Define a bolt and nut, and explain the difference, if any." The girl wrote:

"A bolt is a thing like a stick of hard metal such as iron with a square bunch on one end and a lot of scratching wound around the other end. A nut is similar to the bolt only just the opposite, being a hole in a little chunk of iron sawed off short, with wrinkles around the inside of the hole."

The startled professor marked that one with a large "A." — *The Model Custodian*.

Righto!

"Give me three collective nouns."

Student: "Flypaper, wastebasket, and vacuum cleaner."

Embarrassing

The headmaster of a boarding school was very particular about the behavior of his scholars during meal times, a fact of which the undermasters were fully aware. One day one of the masters observed a boy cleaning his knife on the table cloth, and immediately pounced on him.

"I suppose that's what you generally do at home, sir," he remarked sternly.

"Oh, no," replied the boy, quietly. "We use clean knives at home."

True, Too

Teacher: "Which boy can name five things that contain milk?"

Orlow: "Butter, cheese, ice cream — and two cows!"

Nicknames of Modern Boys

Among the nicknames in use in the Greensburg High School, are Lanky, Gravy, Peanut, Pretzel, Chicken, Pickle, and Greasy. — *Topeka Capital*.

His Hurry

First student: What's your hurry?

Second student: Oh! I just bought a new textbook and I want to get to class before the next edition comes out. — *Wisconsin News*.

Silly of Him

Edith: "Say, mamma, I want to ask you a question."

Mamma: "What is it now, Edith?"

Edith: "When the first man started to write the word 'psalm' with a 'p,' why didn't he scratch it out and start over again?" — *Exchange*.

Up and Down

Teacher: "Now, what is this a picture of?"

Jean: "A monkey."

Teacher: "Yes; and what does a monkey do?"

Jean: "Climbs up a tree."

Teacher: "Yes; and what else?"

Jean: "Climbs down again." — *Toronto Globe*.

Schoolmaster: "A tyrant is a ruler that's hated and feared. Now give me a sentence with the word in it."

Pupil: "The teacher struck the pupil with his tyrant."



Little Girl (after first morning at school): "Mother, you're wrong about B for Bunny. Miss Chadwick says it's for Bread." — *Punch*.

Buyers' News

New Kewanee Steel Boiler Catalog. The Kewanee Boiler Corporation, Kewanee, Ill., has issued its new general catalog No. 80, describing its line of steel boilers, including firebox riveted boilers of the updraft and smokeless type; Type C welded boilers for hand-fired coal and for oil, gas, or stoker firing; as well as square and round type R residence boilers, Tabasco water heaters, water heating garbage burners, and tanks.

A feature of the catalog is the new simplified-practice ratings for firebox boilers for the use of the trade and the architectural profession. The tabulation of specification data and measurements included in this catalog are in accordance with the standard ratings for low-pressure steel-firebox heating boilers, adopted by the Steel Heating Boiler Institute and the U. S. Bureau of Standards.

A copy of the catalog will be sent to any architect or school official, upon request.

New Binney & Smith Catalog of Art Materials. Binney & Smith Company, New York City, have issued a new catalog of 41 pages, devoted to their line of art materials, including crayons, water colors, chalk, powder paint, blackboard crayon, colored chalk crayon, lecturers' chalk crayon, clayola modeling material, library paste, school and commercial paste, and gum adhesive.

A copy of the catalog will be sent to any school official upon request.

Announce New "Teacher's Ditto." Teachers are frequently faced with annoyances due to the inaccessibility of school duplicators. Oftentimes someone else is using the device when the teacher desires to use it.

The Ditto Company, Inc., Chicago, Ill., has announced a new teacher's duplicator, the "Ditto Film-o-graph," which assures teachers of many of the conveniences of a more expensive machine, at the very low price of \$3.95. The Ditto Film-o-graph makes use of genuine Ditto films. The device is capable of copying one job or a dozen, one after another. Through its use it is possible to do a piece of work quickly and clearly, at the lowest copying cost.

The "Ditto Film-o-graph" is intended particularly to give teachers the benefits of genuine Ditto duplicating service at a price any school can afford to pay. Complete information will be furnished upon request.

Catalog of Photo-Micrographic Equipment. Bausch & Lomb have issued a new catalog on photo-micrographic equipment for scientific, industrial, and educational uses. The catalog illustrates and fully describes five special models of micrographic cameras together with special forms of visual research and observation instruments, stereo cameras, and low-power micrographic cameras. The catalog may be had by addressing the firm at Rochester, N. Y.

New Higgins Ink Bottles. In addition to its well-known American drawing-ink line, the Charles M. Higgins Company, Inc., of Brooklyn, N. Y., has announced the introduction of a complete line of writing inks in special bottles for use in fountain pens and dip pens.

Two sizes of cube bottles are available, with wide neck openings, facilitating the filling of fountain pens or for desk use with dip pens. The basic label design, a circle on a square, provides a round spot of color, which makes easy identification of the color of the ink and provides a family resemblance for the entire line. Complete information may be obtained upon request.

Gold Dust in New Packages. The Gold Dust Corporation, 88 Lexington Ave., New York, N. Y., has announced that Gold Dust is now available in 25-lb. and 50-lb. industrial-sized drums. The new drums are intended to effect economies in purchasing and to promote convenience in handling.



THE GOLD DUST INDUSTRIAL PACKAGE

Gold Dust is especially useful in cleaning floors and woodwork in schools. It is effective for washroom and lavatory cleaning and for brightening up tile and porcelain.

Gold Dust in the new package forms is available through the regular jobbers and school supply houses. It may also be purchased direct from the Gold Dust Corporation, in New York City.

Beckley-Cardy Catalog of School Supplies. The Beckley-Cardy Company, 1632 Indiana Ave., Chicago, Ill., has issued its new Catalog No. 62, describing its line of school supplies and equipment. Buyers of school merchandise will be interested in this new catalog, which lists slate blackboards, blackboard erasers, chalk, window shades, maps, globes, stencil duplicators and supplies, paper towels, disinfectants, janitorial supplies, clocks, thermometers, art materials, mechanical-drawing supplies, kindergarten materials, pencil sharpeners, ink and inkstands, pens and penholders, typewriter and duplicating papers, primary seatwork supplies, bookbinding supplies, planbooks, report cards, diplomas, dictionaries, schoolroom pictures, and athletic equipment.

A copy of the catalog will be sent to any school official upon request.

Gunn Trestlewood Desk. The Gunn Trestlewood desk, now being manufactured by the Gunn Furniture Company, Grand Rapids, Mich., is a new, revolutionary idea in office and teachers' desk construction. Its warm beauty and traditional styling make it especially attractive as a fine piece of office and schoolroom furniture, at a remarkably low price.

The Gunn desk applies to furniture the principle of the steel frame which has made the modern skyscraper possible. The desk possesses the strength and lightness of an angle steel frame, and the enclosing surfaces are warm, inviting, figured wood in the best



THE GUNN TRESTLEWOOD DESK

types of fine walnut, oak, etc. The drawers are of a new knock-down type, combining strength with lightness and interchangeability. A new all-steel locking device has been introduced; it is of the positive spring type, which avoids the annoying manipulation of a central drawer.

The Gunn desk may be shipped knock-down and is easily and rapidly built up. All parts are standardized and interchangeable so that costly repairs are eliminated. The desk is manufactured in a variety of sizes and finishes and is priced for the widest possible usefulness and efficiency. It will harmonize with both modern and the more recent standard equipment.

Special information for school authorities has been prepared and may be had from the Gunn Furniture Company, 522 Ann Street, N. W., Grand Rapids, Mich.

New Fulton Therm-o-flush Urinal Valve. The Fulton-Syphon Company, Knoxville, Tenn., has announced its new "Therm-o-flush Valve," devised for automatic operation of the widely used Fulton flush valve. The new device solves a problem in educational and public buildings where there is a demand for automatic flushing to insure sanitation, to promote economy, and to guarantee performance of the plumbing fixtures with a minimum of attention.

The Therm-o-flush is a thermostatically operated device, which automatically operates the flush valve each time the urinal is used. The thermostatic action operates a valve placed in the relief pipe line, giving the same flushing action as is accomplished by manual operation of the flush-valve handle. The Therm-o-flush is especially adaptable to schools and educational institutions.

A copy of the circular describing the device will be sent to any school official, or architect, upon request.

New Holophane Catalog. The Holophane Company, 342 Madison Ave., New York City, has issued its latest catalog, illustrating and describing its complete line of commercial, industrial, and institutional lighting systems.

School authorities will find the Holophane catalog of particular value for the solution of special problems of classroom lighting and for the solution of the peculiar lighting problems of gymnasiums, laboratories, manual-training shops, auditoriums, art rooms, etc. The catalog will be sent to any school authority upon request.

THOUGHTFUL ENGLISH COMPOSITION

By Fred G. Fox

Planned to encourage students to think and to express their thoughts correctly, this presentation of essential elements of English composition follows the latest and best composition methods. As it prepares the student to meet the problems of college composition and the practical writing of life, it proves to him that the principles

of good writing are based on common sense and good taste. Progressive lessons in grammar, punctuation, and sentence structure are prominent features of the book which yields readily to the unit system of teaching.

96 cents

PRACTICAL STUDY OF PUBLIC SPEAKING

By Herald M. Doxsee

A text for high schools designed to help the student meet the numerous situations in modern life that demand a working knowledge of effective public speaking . . . sales talks, extemporaneous and after-dinner speaking, conducting meetings, etc.

\$1.32

PRACTICAL STUDY OF AMERICAN SPEECHES

By Herald M. Doxsee

Forty-one carefully selected speeches providing excellent examples of composition for high-school classes, at the same time presenting a cross-section of the thought of American leaders of today and yesterday. Illustrated with interesting pictures of famous American speakers.

\$1.60

The Bruce Publishing Company

New York

Milwaukee

Chicago

FIRST-YEAR ALGEBRA

By Kingsbury and Wallace

One hundred per cent adaptable to any high-school course, this text provides all the elements of teachability, comprehensiveness, and student interest in a complete course for the beginner. Abundant drill material and a unique method of developing fractional equations are outstanding features.

\$1.32

PLANE GEOMETRY WORKBOOKS

By Kingsbury and Wallace

Practice tests and general review tests covering the facts and principles of plane geometry, designed to provide drill on the principal proposition.

Complete Edition, 76 cents; Abbreviated Edition, 40 cents.

ADVERTISERS' INDEX

Acme Shear Company, The.....	86	Faultless Caster Company.....	89	Norton Company	52
All-Steel-Equip Co., Inc.....	51	Finnell System, Inc.....	76	Norton Door Closer Company	6
Allyn and Bacon.....	Fourth Cover	Fisk Teachers Agency.....	89	Nystrom & Company, A. J.....	79
American Automatic Electric Sales Co.....	62	Ford Company, The J. B.....	92	Peabody Seating Company, The.....	58
American Crayon Company	81	Franklin Research Company.....	82	Petersen & Company	89
American Floor Surfacing Machine Co.....	89	Fulton Sylphon Company.....	Second Cover	Peterson & Co., Leonard.....	87
American Seating Company	69	Gold Dust Corporation.....	75	Playcrafters Guild of America, The.....	89
American Type Founders Sale Corp.....	54	Goodyear Tire & Rubber Co., The.....	65	Potter Manufacturing Corporation.....	89
Architects Directory	88	Hamilton-Invincible, Inc.	68	Powers Regulator Company.....	8
Armstrong Cork Products Company.....	53	Hart Manufacturing Company.....	89	Premier Engraving Company.....	84
Arlington Seating Company.....	85	Hartman & Company, Wm. E.....	89	Remington Rand (Systems Division).....	16
Automatic Pencil Sharpener Co.....	86	Hoff Rubber Stamp Co.....	87	Rowles Co., E. W.....	84
Bassick Company, The	13	Hoffman Specialty Co., Inc.....	6	Royal Metal Mfg. Company.....	57
Bausch & Lomb Optical Co.....	61	Holden Patent Book Cover Company.....	55	Rundle-Spence Mfg. Company	8
Beck Studios	89	Huntington Laboratories	72	Schermerhorn Teachers' Agency.....	89
Beckley-Cardy Company	85	International Business Machines Corp.....	67	Sengbusch Self-Closing Inkstand Company	84
Bell & Howell.....	62	Irwin Seating Company.....	79	Sheldon & Company, E. H.....	66
Berger Mfg. Company.....	77	Johnson Service Company.....	7	Spencer Turbine Company.....	6
Binney & Smith Company.....	78	Kewaunee Mfg. Company.....	60 & 63	Standard Electric Time Co., The.....	50
Boehm Bindery	89	Kimball Company, W. W.....	79	Standard Manufacturing Co., The.....	86
Bruce Publishing Company.....	91	Laidlaw Brothers	54	Stewart Iron Works Co., The.....	87
Carbon Solvents Laboratories	89	Lyon Metal Products, Inc.....	13	Sturtevant Company, B. F.....	8
Celotex Company, The.....	71	Maple Flooring Mfrs. Association.....	1	Tiffin Scenic Studies.....	89
Century Brass Works.....	10	Medart Mfg. Co., Fred.....	10	Turner & Harrison Pen Mfg. Co., Inc.....	84
Clarin Manufacturing Company	62	Merriam Company, G. & C.....	54	Twin City Scenic Co.....	87
Columbia School Furniture Corp.....	89	Midland Chemical Laboratories.....	70	Underwood Elliott Fisher Company.....	49
Congoleum-Nairn, Inc.	59	Miller Keyless Lock Co., J. B.....	84	Universal Bleacher Co.....	89
Crane Company	9	Minneapolis-Honeywell Regulator Co.....	Third Cover	Universal Scenic Studio.....	89
DeMoulin Bros. & Co.....	89	Morrison Laboratories	89	Universal Sound System, Inc.....	84
Dick Company, A. B.....	3	Natl. School Supplies and Equipment Ass'n.....	12	Victor Animatograph Corporation	80
Ditto, Incorporated	14	National Vulcanized Fibre Company.....	76	Vogel Company, Joseph A.....	74
Draper Shade Co., Luther O.....	13	Natural Slate Blackboard Company.....	73	Vonnegut Hardware Company	2
Dudfield Mfg. Co.....	89	Nesbitt, Inc., John J.....	4	Walrus Mfg. Company	80
Dudley Lock Corporation.....	87	Newcastle Products, Inc.....	87	Warren Telechron Company	69
Electric Storage Battery Co.....	11	New York Silicate Book Slate Co.....	86	Wayne Iron Works	76
Esterbrook Steel Pen Company.....	62			Weber Costello Company	54
Evans, W. L.....	80			Western Electric Company	83
Everwear Mfg. Company.....	87			Whiting Corporation	5

MODERN FOR FORTY YEARS

THE WYANDOTTE you get today is by no means the same Wyandotte you got forty years ago, or even five years ago. Wyandotte has constantly kept pace with changing conditions and is today, as it has always been, the most modern and efficient cleaning material you can use.

This constant improvement has been possible because of constant intimate contact with all sorts of cleaning problems. Wyandotte Service Representatives are always adding to their knowledge of modern cleaning requirements.

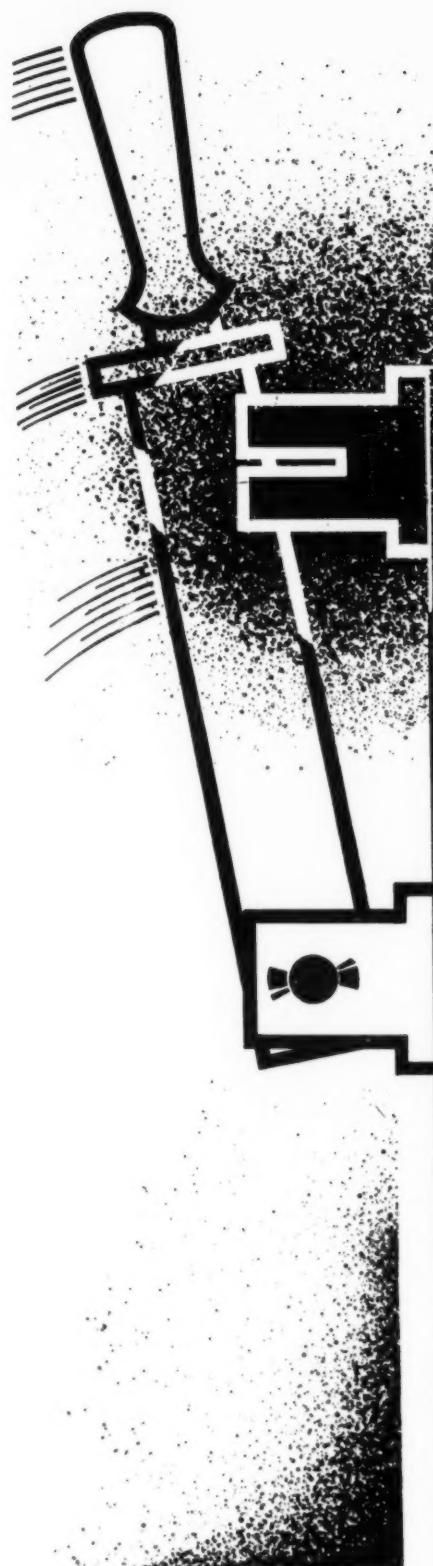
This knowledge plus complete control of raw materials and the most modern of manufacturing facilities makes it possible to keep Wyandotte thoroughly up to date.

Wyandotte offers the school a complete family of specialized cleaning materials, each one giving you the efficient, economical cleaning that thousands of satisfied users have had for many years.



Ask your jobber or your Wyandotte Service Representative about Wyandotte or write us for complete information.

THE J. B. FORD CO. «» Wyandotte, Michigan



INSTANT POWER

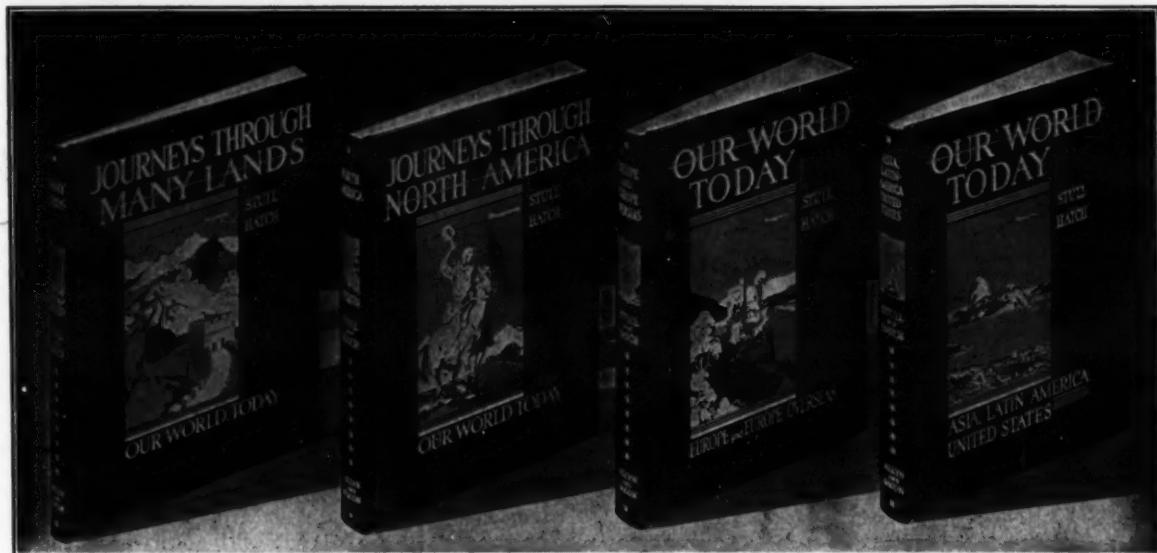
with the
MODUTROL SYSTEM

Since the Minneapolis-Honeywell Modutrol System of heating, ventilating and air conditioning control is electrically operated, it provides instant power to valves, dampers and louvers. It consequently provides greater control accuracy than is possible with systems having inherent lag between the time thermostats call for change and the time such changes in control actually occur. Minneapolis-Honeywell Controls are backed by a half century of research and practical field experience. When you specify control equipment, select the best. It always pays. Minneapolis-Honeywell Regulator Company, 2830 Fourth Avenue South, Minneapolis, Minn. Branches everywhere.

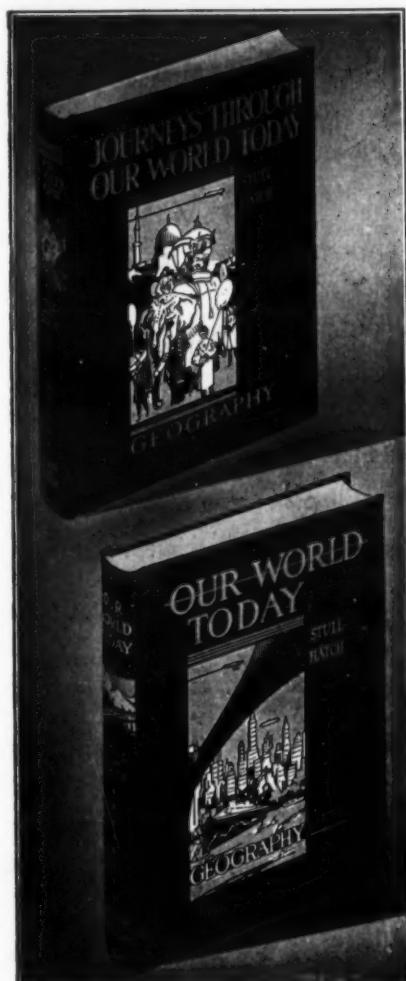
MINNEAPOLIS-HONEYWELL

Control Systems

BROWN INSTRUMENTS FOR INDICATING, RECORDING AND CONTROLLING



THE NEW GEOGRAPHY



Viresque acquirit eundo — And it gains strength as it goes.
Virgil

There are four great reasons for the increasing success of the STULL and HATCH NEW GEOGRAPHIES, OUR WORLD TODAY.

1. The language of the series is simpler and easier to understand than that in any other geography.
2. The typography and page architecture of the books are in accord with the latest research.
3. The illustrations and maps are the finest obtainable.
4. The captions beneath the illustrations are picturesque and vital, and encourage interest in geography.

The New Geography is the Core of the Social Studies Course.

Allyn and Bacon

BOSTON

NEW YORK

CHICAGO

ATLANTA

SAN FRANCISCO

DALLAS